ARTICLE

Digital Social Connectedness as a Lifeline for Older People: Use and Non-use of VinclesBCN During the Pandemic

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Abstract
This article presents the results of a study that evaluated VinclesBCN during COVID-19. This digital-based public social service aims to prevent loneliness and isolation in +65-year-old adults living in Barcelona. Through service user (N = 12) and professional (N = 6) interviews and a questionnaire with service users (N = 255), we demonstrate the pivotal role of digital connectedness in transforming VinclesBCN into a lifeline during the pandemic. The analysis revealed the importance of sociability, social support, and, especially, entertainment in coping with pandemic fatigue and facilitating social connectivity and support among users. Users engaged in activities such as sharing images, songs, memes, and daily greetings to provide proximity, sociability, and care among users, whether they belonged to preexisting groups or were newly introduced to the platform. It also facilitated the identification of individuals who needed companionship, comfort, or more specialized support. The findings emphasize the significance of entertainment as a resilience-building strategy during times of uncertainty. Despite the positive impact, not all users equally used the platform. Non-use was strongly associated with being a woman, having a low educational level, having preexisting social relationships, less time of enrolment in the platform, as well as a high perception of loneliness, poor self-reported health, and low mood. The article underscores the need for further research into older adults' digital engagement during crises, its role in building resilience, and advocating for inclusive digital interventions that take into account diverse older adults' needs and experiences in crisis contexts.

Keywords Barcelona · COVID-19 pandemic · Digital social connectedness · Entertainment · Older adult resilience · Public digital service

1 Introduction

This article presents the results of a research project evaluating VinclesBCN during COVID-19. VinclesBCN is a public social service based on a social networking app and a tablet that seeks to prevent loneliness and isolation in +65-year-old adults living in Barcelona. Based on a mixed-methods research, the article shows how digital connectedness was vital in turning VinclesBCN into a "lifeline" during the pandemic. We show how service social workers, and especially users, reshaped the digital platform to facilitate social contact and support in a particularly

threatening and stressful situation. In particular, we found that both were fundamental for providing distraction and entertainment, taking the minds of older people away from the crisis and uncertainty triggered by the virus (Kamalpour et al. 2020; McLeod et al. 2021). This, in turn, materialized ways of combating the risk of isolation and loneliness associated with confinement and social distancing measures. Moreover, the platform was crucial for many people to expand their connectivity and give or receive support (Brooks et al. 2022). It facilitated the reception of new people or the setting of relationships and support among people who did not know each other or were struggling to cope with the situation (Yu et al. 2023).

In this article, we elaborate on the significant role of entertainment during times of crisis. As our research demonstrated, entertainment was central in providing distraction and protection, both at individual and collective levels, against pandemic-induced stress (Derrer-Merk et al. 2023). Furthermore, entertainment contributed to maintaining

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a space characterized by proximity, openness, and care among users, whether they belonged to preexisting groups or were newly introduced to the platform. It also facilitated the identification of individuals needing companionship, comfort, or more specialized support (López-Gómez and Rodríguez-Giralt 2024). While existing evidence highlights the role of entertainment in crisis and disaster contexts, particularly in fostering social connectivity by other means (Brooks et al. 2022; Clayton et al. 2023), our research also showed that as the pandemic persisted, entertainment became increasingly prominent. These findings suggest that entertainment deserves more attention in disaster studies, particularly in later life.

This article also contributes to the literature examining the agency of older adults in disaster situations (Aldrich and Kiyota 2017), especially the role of older people's connectivity in fostering individual and community resilience during crises, disasters, or pandemics. The article describes the factors affecting older adults' use of the service during the pandemic. We show that not using the service and not benefiting from its digital connectedness was strongly associated with joining during or right before the outbreak, a higher perception of loneliness, lower mood, poorer self-reported health, and low education. In the article, we align the findings with existing literature on the digital connectivity of older adults during the pandemic. This is in line with previous studies that showed the significance of preexisting social relationships (Derrer-Merk et al. 2022), the support offered through emergency digital interventions (Conroy et al. 2020), and perceptions of physical and emotional well-being (Chan et al. 2022; Guzman et al. 2023). These findings highlight the imperative to further investigate the factors influencing older adults' digital engagement in disasters and their agentic role in building community resilience.

The article is structured as follows. After introducing the theoretical framework, we present the method and the participants. In the results, we first analyze the most common digital practices in VinclesBCN: entertainment, sociability, and mutual support. Second, we describe the most active older users during the pandemic alongside those who reported not using the service. The discussion reviews the findings and puts them into the context of existing literature on digital connectedness and older people's resilience. We conclude by reflecting on how older people's digital connectedness would make them more resilient in crisis contexts.

2 Theoretical Framework

This article draws on two main bodies of work that have had limited dialogue before the pandemic. On the one hand, it includes studies about the active role of older adults in disaster situations. These studies sustain the notion that older people have memory, knowledge, and resources that are valuable in situations of crisis and disaster (Cornell et al. 2012; Greenberg 2014; Howard et al. 2017; Hou and Wu 2020). Many times, they can (and are willing to) take leadership and responsibility roles (Brockie and Miller 2017). They are central to reinforcing family and community ties, maintaining informal networks, strengthening social identity, and building intergenerational trust and community resilience (Yotsui et al. 2016; Aldrich and Kiyota 2017; Qi and Gu 2020).

This literature is significant as it underscores the agency of older adults in constructing and mobilizing social capital, support networks, and social connectivity in crisis and disaster situations. As demonstrated, this relational and communicative dimension plays a crucial role in building resilience at the individual and community levels (Aldrich 2012). Resilience is seen as a multidimensional process (Gaffey et al. 2016) that speaks to the ability of people and communities to survive, adapt to, and recover from loss and disruption (Manyena 2006; Aldrich and Meyer 2015; Fothergill and Peek 2015). As suggested, resilience is essential for older adults' well-being, particularly for successful aging in place (McClain et al. 2018). However, there are few studies on how digital connectivity and online communities contribute to resilience among older adults (Colibaba et al. 2021). As Kamalpour et al. (2020) pointed out, "online communities" can provide social support, self-empowerment, and well-being improvement among older people in disaster situations.

On the other hand, we engage with the literature that studies how digital technologies contribute to alleviating older people's exclusion, isolation, and unwanted loneliness (Beneito-Montagut et al. 2023), especially during the pandemic caused by the circulation of the SARS-CoV-2 virus. There has been a significant increase in the number of studies on how digital technologies have helped to mitigate the impact of lockdowns and restrictions on older people (MacLeod et al. 2021; Sixsmith et al. 2022; Todd et al. 2022; Garcia Diaz et al. 2023; Zhang et al. 2023). Most of these studies concentrate on examining the access, adoption, and use of technologies, as well as the mitigating role of digital "connectedness" (Scarfe et al. 2022; Beardmore et al. 2023; Garnett et al. 2023), mainly from an assistive and health-centric standpoint (Armitage and Nellums 2020). They highlight the importance of several digital technologies to maintain emotional well-being (Banskota et al. 2020), mental health (Shapira et al. 2021; Skałacka and Pajestka 2021), physical activity, quality of life, or family and social network contact when people are confined to their homes (Cugmas et al. 2021; Kulmala et al. 2021; Derrer-Merk et al. 2022; Rodrigues et al. 2022; Chung et al. 2021).

Overall, this literature highlights, first, that digital connectivity can be crucial in building resilience among older people in times of crisis, including more entertaining and mundane ways of engaging in hobbies, simple pleasures, leisure activities, or exchanging informal support with family, friends, and neighbors (Chung et al. 2021; Whitehead and Torossian 2021; Brooks et al. 2022; Lee et al. 2022). Second, having preexisting established social relationships or belongingness to groups or communities rooted locally is crucial for resilience in crisis times (Derrer-Merk et al. 2022; Berdmore et al. 2023). Finally, it also points out a series of barriers (Dhakal et al. 2023) that worsen pre-existent inequalities, such as additional burdens related to ageism, racism, and gender discrimination experienced by older adults during the pandemic (Derrer-Merk et al. 2023) and the so-called digital divide (Sin et al. 2021). This literature also highlights the need to delve into a more community-based, socioecological, and resilient perspective (Geyer et al. 2023; Kadowaki and Wister 2023) of this digital connectivity among older adults during times of crisis.

3 Methods

This article is based on a mixed-methods research project about VinclesBCN.[1] Through general physicians, social centers, and other social care facilities, social care services provide older people at risk of isolation and loneliness a tablet with an app that gives access to a social network composed of over 3000 older adults living in Barcelona. The application offers thematic channels, discussion boards, one-to-one video calls, and text or voice messages with their family, friends, and other users who live in the same neighborhood or share interests and hobbies. A social workers team acts as moderators and facilitators of individual and group engagements in the various online forums created within the app. They also organize offline encounters among users.[2]

The service took on a whole new dimension when COVID-19 began.[3] In September 2020, the municipality commissioned an evaluation of VinclesBCN's response to the pandemic and its effects on users' social connectedness.[4] The evaluation of VinclesBCN started in October and finished in December 2020, a time with various restrictions and limitations still in place.[5]

The research took an exploratory approach, given the novelty of the phenomenon (Creswell et al. 2013). We combined semistructured qualitative interviews (N = 12 users and 6 professionals) and questionnaires (N = 255 older people enrolled in the service regardless of their actual usage). All the data were collected by phone[6] to adhere to the physical distance measures during the fieldwork (Melchiorre et al. 2023). It is also worth saying that López-Gómez and Rodríguez-Giralt volunteered in the service during the first months of the pandemic (from April to July 2020), giving us valuable clues on older people's practices on the platform (López-Gómez and Rodríguez-Giralt 2024).

3.1 Interviews

The semistructured interviews were designed to understand users' social connections and the platform's role in maintaining older people's connectivity. Additionally, they allowed for the emergence of new topics while providing space for open discussion. The questions included demographic backgrounds, use, frequency, and type of interactions within the service, other social

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Footnote 2 (continued)

older than 75 live alone. The life expectancy is 83.8 years (see Pérez Díaz et al. 2023).

[3] In addition to its regular channels, the service created three pandemic-specific channels: "Local Police," "Health," and "Companion." The first one for public order issues and mobility restrictions led by the local police, the second one for public health issues and medical advice led by primary care workers, and the latter for providing psychosocial accompaniment led by social psychologists.

[4] The research was commissioned by the Department of the Promotion of the Elderly, Social Rights, Global Justice, Feminism and LGBTI of the Barcelona City Council. The full report can be found at: https://ajuntament.barcelona.cat/dretssocials/sites/default/files/arxius-documents/resultats-vinclesbcn-temps-pandemia-entreteniment-connectivitat_social-suport.pdf.

[5] The Spanish government declared a "state of alarm" on 14 March 2020, that lasted until 21 June 2020. This included strict lockdown policies and a gradual de-escalation from 4 May on. On 25 October 2020, a second state of national alarm began, including various restrictions and limitations. Our fieldwork took place during the second state of alarm. At that time, 20,565 people had died in Catalonia due to COVID-19, of which 18,231 were over 70 (88,65%). Older people's safety, health, and well-being were still Spain's most pressing public health issue (Zalakaín et al. 2020; Rodrigues et al. 2022; González Ortega et al. 2023). This increased the interest in services such as VinclesBCN.

[6] Telephones have been a standard data collection method, also during the pandemic. As the literature has shown, telephone interviews can be less costly, permitting flexible scheduling and increasing perceived anonymity and privacy (Self 2021). They also allow for a more exhaustive sample (Block and Erskine 2012).

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[1] *Vincles* in Catalan means "links" and BCN stands for "Barcelona."

[2] VinclesBCN is part of the catalogue of public services of Barcelona's municipal strategy against loneliness. Among other public services, such as intergenerational home sharing, cycle without age, and meal sharing, it promotes social connectivity. It also complements Radars, a community-based service to detect people at high risk of isolation, and the Telecare Service, which assists people living alone in emergencies. In Barcelona, older people (> 65) constitute 21.6% of the population. Three out of every 10 people

Table 1 Interviews of users of the VinclesBCN digital public social service in Barcelona (N = 12)

Interview	Gender	Age	Marital status	Do they live alone?	Housing	Educational level[a]
1	Male	78	Divorced	Yes	Private home	Secondary
2	Female	87	Single	Yes	Care home	Primary
3	Female	71	Divorced	Yes	Private home	Secondary
4	Female	77	Widow	Yes	Private home	Primary
5	Male	93	Married	No, caregiver of a relative	Private home	Higher
6	Female	71	Widow	Yes	Private home	Primary
7	Male	73	Widower	Yes	Serviced apartment	Higher
8	Male	76	Widower	Yes	Private home	Higher
9	Female	69	Divorced	No, caregiver of a relative	Private home	Primary
10	Male	87	Widower	Yes	Private home	Secondary
11	Female	80	Widow	Yes	Private home	No education
12	Female	84	Widow	Yes	Private home	Primary

[a]Primary education is the first stage of formal education (it occurs between 6 and 14 years old). Secondary education covered the Baccalaureate and further education. Higher education refers to university level.

Table 2 Interviews of professionals involved with the VinclesBCN digital public social service in Barcelona (N = 6)

Interview	Gender	Age	Profession	Role in the Service
1	Male	62	General physician	Health channel facilitator
2	Male	59	Local Police	Local police channel facilitator
3	Female	51	Social Worker	Manager
4	Female	29	Social Educator	Neighborhood and thematic channels' facilitator
5	Female	32	Social Educator	Neighborhood and thematic channels' facilitator
6	Female	27	Social Educator	Neighborhood and thematic channels' facilitator

activities beyond VinclesBCN, and questions about feelings, changes, and learnings through the pandemic.

The interviewed users were purposely selected because of their active role in the emotional support channel. According to the Barcelona older people population distribution and the service take up, there were more women than men in the sample (Table 1). The interviews lasted between 30 minutes and one hour and were transcribed and analyzed by the authors.

Similarly, we conducted semistructured interviews with 6 professionals (Table 2). All interviewees were actively involved in delivering the service VinclesBCN during the pandemic. We asked them about the arising needs of older people in this period and how the service supported those needs. The questions aimed to evaluate the impact of the pandemic on their work and get their views on user's activity within the service.

Both sets of interviews were analyzed using a grounded theory approach (Charmaz and Belgrave 2012). We coded them with emerging codes, including iteration and interactive analytical strategies among the researchers. This engendered reflexivity and ongoing discussions about the interpretations. The previous experience achieved through volunteering in this public service proved key for

contextualizing the qualitative analysis of the interview data.

3.2 Questionnaire Survey

In parallel, a phone questionnaire survey was conducted with 255 older people enrolled in VinclesBCN (Table 3). The survey was conducted in Catalan and Spanish; 137 participants responded to the questionnaire in Catalan and 118 participants responded in Spanish.

We recruited participants from the entire service database. All VinclesBCN users received a message from the service inviting them to participate voluntarily. The researchers were provided with a list of the respondents' phone numbers and personal information. Subsequently, they contacted them via phone to arrange a convenient time for the questionnaire survey. The average age of the respondents was 79.33 years old (standard deviation (SD) 6.7 years).

The sample shows a slight over-representation of women compared to the general population of VinclesBCN (81% women, 18% men). Moreover, 3.1% of the survey respondents were international migrants. Most users resided independently in the community, with more women living alone than men. The sample predominantly includes

Table 3 Socio-demographics of the respondents to a phone survey of 255 users of the VinclesBCN digital public social service in Barcelona (in percentages of the 255 surveyed)

		Gender		Total
		Woman	Man	
		83.1	16.5	100
Age				
	60–69	5.9	1.6	7.5
	70–79	37.6	7.5	45.1
	80–89	34.1	6.3	40.8
	90–99	5.5	1.2	6.7
Place of birth				
	Barcelona	39.2	6.7	46.3
	Catalonia	9	2	11
	Spain	32.5	7.1	39.6
	Other countries	2.4	0.8	3.1
Type of housing				
	Own or rental flat	74.9	15.3	90.6
	Service flat	5.1	1.2	6.3
	Relatives' home	2.4	0	2.4
	Elderly home	0	0	0
Cohabitation				
	Alone	62.7	8.2	71.4
	With someone	19.6	7.8	27.5
	Others	0.8	0	0.8
Educational level				
	No schooling	12.2	1.6	13.7
	Primary	32.9	7.1	40
	Secondary	28.6	6.3	35.3
	Higher	8.2	1.6	9.8

individuals with primary and secondary education who were employed in manual or low-skilled occupations (for example, mechanics, hairdressers, dressmakers), as well as those in middle or high-skilled professions (for example, administrative staff, civil servants, commercial roles, and healthcare workers). Additionally, 14.1% of the respondents reported being caregivers, of whom 81% were women.

The questions included purposively designed questions for this study. We asked about demographic backgrounds, VinclesBCN uses and frequencies of use, and social connectivity (Waycott et al. 2019). This research also incorporated previously validated and standardized questionnaires for reliability and comparability. We adopted standardized questions for health (Euroqol), perceived loneliness (Survey of Health, Ageing, and Retirement in Europe—SHARE), and depression items (Geriatric Depression Scale, GDS-5, reduced version of 5 items). The respondents who reported that they never used VinclesBCN (23.9%) were directed to the social connectivity and standard questions about health, loneliness, and depression, and did not reply to the questions about uses and frequencies of use. Respondents were allowed to leave questions unanswered.

The questionnaire data underwent statistical analysis, including descriptive and bivariate analyses. The Results section presents descriptive and inferential statistics findings alongside insights obtained from interview data. The interview data provided context and support for interpreting the survey results.

This research obtained ethical approval from Universitat Oberta de Catalunya's Research Ethics Committee. The article complies with the university's code of ethics. All participants were informed about the research aims and their right to withdraw before the interviews and questionnaire survey and provided verbal consent. Their names were anonymized, and all interviewees and respondents were assured confidentiality. The name of the service was not anonymized with explicit consent from its managers.

4 Results

The majority of the surveyed users, 76.1%, reported having used VinclesBCN during the pandemic, 57.3% of them daily or several times per week. Of those who used it, 58.7% reported an increased use and 7% a reduction. The service users and service social workers confirmed that people using VinclesBCN increased their use, and many people who had hardly used it began to use it more frequently, particularly during the initial months of the pandemic. For many, as one user said, "the tablet became a last resort" [*una tabla de salvación* in Spanish],[7] a "lifeline" in a difficult situation. In what follows, we aim to understand how, why, and for whom VinclesBCN became a lifeline.

4.1 A "Lifeline" of Entertainment, Socialization, and Mutual Support

According to the survey, almost all respondents (90.5%) used VinclesBCN as a "way to pass the time, entertain oneself, and escape" (Fig. 1). This percentage indicates that entertainment was the most widespread motivation for using the service.

The relevance of entertainment is also observed when we look at the most used channels during the pandemic (Fig. 2). Of the surveyed users, 60% reported "thematic channels" among the most used. This is significant because users join "thematic channels" on demand, unlike joining

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[7] In Spanish, the word "tableta," translated as "tablet," shares the same etymological root with "tabla," which literally means "board." This connection allows for a clever wordplay between "lifeline" (*tabla de salvación*) and "lifeline tablet" (*tableta de salvación*).

Fig. 1 What do you use VinclesBCN for? (in percentages of those surveyed, N = 189) Note: Several options were possible.
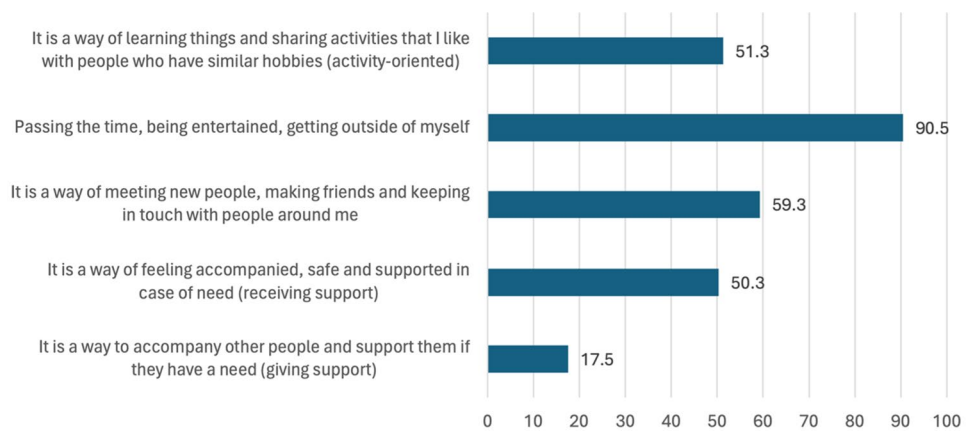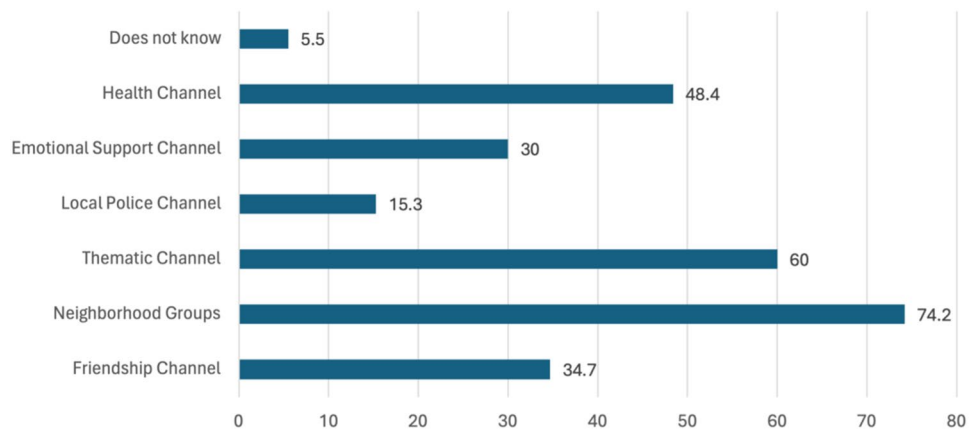

Fig. 2 Frequency of use of VinclesBCN channels/groups (in percentages of those surveyed, N = 190)

the "neighborhood" ones, which require more active engagement. They are formed by users interested in cinema, gardening, reading, poetry, travel, and so on. Service social workers are responsible for curating the content and the social dynamics to keep them engaged and entertained.

According to these professionals, as the pandemic lengthened, entertainment gained ground and became more critical in coping with the situation. In the first weeks, users used the platform, mainly "neighborhood" and "friends" channels, to come together and get some support, as there was a lot of fear and uncertainty. Service social workers also had to provide "emotional containment," as some users were afraid, stressed, or mourning dear losses. However, after weeks of strict lockdown, most of these interactions dropped, and people seemed to have more difficulties staying connected, engaged, and supporting each other:

> There was a first moment, in the first weeks of lockdown, in which a lot of people who had not said anything for a long time began to talk. Everyone was very supportive, very active, and very positive. As the weeks progressed, it became apparent that

some people had suffered significant losses. In some groups, some users died of COVID. The group also felt this. There was a point where there were people who stopped using the groups because they said: "I'm sitting in my house, I can't do anything, I can't see anyone, I have nothing to explain and, when I come in to talk, all I see are misfortunes and I get even more discouraged." We've been working hard to encourage them. (Irene, service social worker)

In this context, entertainment was important to deal with boredom and provide a way of disconnecting from the (negative) news "avalanche." Reading, listening, and watching what users and service social workers posted became part of many users' daily routines:

> The TV they [TV channels] give you… it's crap, you don't know what to do. Because I have a Sudoku here right now, and you get tired of doing Sudokus and all that, so I take the tablet, check, and start reading... Well, I read what they [VinclesBCN] say or watch what they play and what they say. It helped me a lot. (Antonio, user)

Service social workers played an essential role in making this possible. As the pandemic deepened, they avoided conversations about the virus and devoted more time to finding entertaining content to share with users. This was a challenge for them:

> Everyone has had to adapt and readjust. I remember we all got organized to make video calls, send them resources, search for, research, and send them things to distract them, from films to musicals [...] Countless things that we would never have considered sending because we focused a lot on face-to-face outings, and we are adapting to that. (Laia, service social worker)

As explained in the following quotation, they had to develop new strategies to keep the users of the thematic channels engaged, distracted, and busy:

> On Monday, I send videos of interesting things. On Tuesday, I talk about a spice. On Wednesday, I send a recipe containing the spice they talked about the day before, or I talk about seasonal fruits and vegetables… (Sandra, service social worker)

The "thematic" groups became "shelters" of entertainment. As previously expressed by Antonio, many users perceived these interactions as more emotionally attuned, enabling them to "escape" from worrying and stressful news and messages.

In addition to the service social workers, users played a very active role in providing entertainment. Some users were pretty active in posting messages and carrying out content-curating work, similar to those described by the professionals. Music fans, for example, sent video clips of the songs they liked. Some users wrote poetry and recited them on channels or video calls. Other users shared photographs of the places where they lived, their plants at home, or their grandchildren and relatives. As Rosa explains, content curation became a daily routine that kept her busy and helped her to stop thinking about other concerns. It also allowed her to feel appreciated for her tasks:

> I'm almost all afternoon with the tablet in my hands, and I'm switching channels... since I participate in several groups, apart from the neighborhood one. I go from one group to another, move things from one group to another, copy from here to there, put things, and amuse myself a lot [...] I am the most active in the neighborhood group because I post a lot of content during the day … and many people appreciate it. (Rosa, user)

Moreover, the interviewed users also referred to posting and sharing entertaining content online as caring for each other. For instance, Marcos posted creative drawings to capture the attention of other users and "enliven" the groups'

interactions. Similarly, he shared anecdotes and ironic messages or designed and distributed self-made images, for instance, with colored umbrellas saying "good morning" or "don't get wet" to cheer up other users on "grey and rainy days."

The survey showed that "phatic messages with positive and inspiring messages" and "content posted from the Internet" were crucial motivations for sending messages (56.2 and 33.5%, respectively). This is significant in a service designed to privilege[8] the establishment of social bonds through online interactions, mainly audio messages and video calls, where users share personal experiences, feelings, and opinions (57% prevalence during the pandemic).

The second most remarkable motivation for using the service was sociability. This is not surprising, given that it is the main objective of VinclesBCN. Indeed, 59.3% of the respondents used the service to "meet new people," "make friends," "keep contact and relationship with people," and 51.3% "to learn things and share activities with people" (see Fig. 1). This more relational and social dimension of VinclesBCN was especially crucial for people who had a busy social life, principally outdoors, before the pandemic. This is the case of Maria:

> I only have one daughter; she lives in Italy, and well, this has helped me talk to people. [Before the pandemic,] I was a volunteer in Radars [a community project to alleviate and prevent older people's loneliness], and I went to the Casal [Seniors' social club]. I did loads of activities, and suddenly, they locked me at home. And VinclesBCN has been a door for... The exit, right? (Maria, user)

"Neighborhood" and "friends" channels were especially important in promoting sociability. The former was reported as one of the most used by 74.2% of users, while the latter by 34.7% (see Fig. 2). This is unsurprising as "neighborhood" channels are always the most used, as all users are included in such groups with other users from the same city area. "Friends" channels were less used because they are formed on demand, usually when a group of closer users prefer a more private space. They tend to be spaces that combine online interactions with meetings in the flesh. During the pandemic, many users used these channels, most of which had been formed long before COVID-19, to maintain their friendships remotely. Here is what Rosario says about this:

> I'm more at VinclesBCN now because I used to hang out quite a bit with the people from VinclesBCN I

Fig. 3 Type of messages posted by VinclesBCN users (in percentages of those surveyed, N = 194)
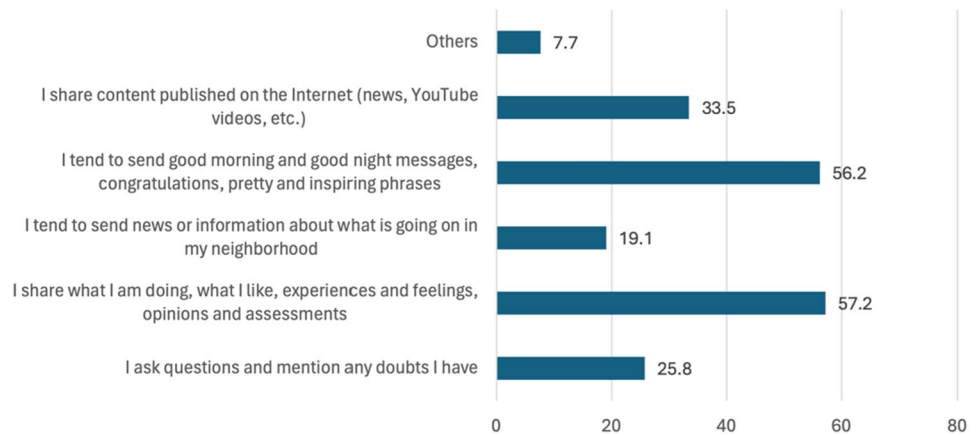
befriended. We went out to eat... With a friend and, well, three or four, many Saturdays and many Sundays, we went to have lunch, and then we also met in the middle of the week. We met a lot [...]. We now talk more through VinclesBCN. Thanks to VinclesBCN, I have all these people with whom I communicate and talk. (Rosario, user)

As these channels are self-managed, they were mainly sustained thanks to the active role of users who periodically posted content. In many cases, these were brief messages: "Good morning" and "Good night," with humorous images and catchphrases to "lift the spirits." As seen, these kinds of messages were quite prevalent at 56.2% (Fig. 3). They were kind words and expressions to start chatting about everyday life, often among new users or users who did not know each other. They mainly aimed to set a sense of togetherness that, despite being remotely situated, allowed them to open up conversations with other people. Xavier explains his way of interacting with the service:

Every day, if I can, I check [the tablet] because they post movies, reports, documentaries, and we say hello... I say, "Good night, Vincles comrades," or "Good morning"... if not every day, very frequently. (Xavier, user)

The most active people also shared experiences, opinions, or thoughts. As reported before, 57.2% of the respondents posted these kinds of messages (Fig. 3). They were often audio messages, but sometimes they were typed. As Encarna explained, some users preferred these more personal and conversational engagements rather than the entertaining:

Now what they do most is to send things to you to see, not talk, but see landscapes or see some... I don't know… some pretty views of another country... nice things too. But we're hungry for personal relationships, meeting with another person, not seeing a photograph, which is very beautiful and makes you have a good time, but it's not the same. The most convenient thing is to be able to talk and be able to listen to the experiences of others. (Encarna, user)

This shared ground of entertainment and sociability was, in fact, key for the service to also become a space of social support. Of the respondents, 50% said VinclesBCN helped them "feel accompanied, safe, and supported in case of need." Service social workers provided support (75% of users got support from them), but users also supported each other (29.7% of respondents received support from other users, and 17.5% gave it). For example, some users, such as Rosa, did a more determined task of supporting those who were less participatory:

I talk to them. If one is from Orense [a northern Spanish province], I will ask him about Orense and the chestnuts. Do you understand? I mean, you try to be quick to tell everyone what you know about what you are getting from them in the conversations. If one loves plants, if another has a dog if one has... Whatever it is, right? (Rosa, user)

These dynamics were the basis of mutual help during the pandemic, especially towards people feeling down, isolated, or stressed. For instance, the "neighborhood" and "support" channels favored mutual support among people who did not have previous friendships. Through everyday interactions, users like Rosa managed to help others:

You get to know people, little by little, with the audio recordings or with the writings you are doing, so we get to know each other. I mean, little by little, in every writing or every audio... people drop little things that, if you listen, you start getting them, and you can use [...] People tell you their stories, you answer them. "Look, I think…" Or if you are worried or you are... "Don't worry, it will go away," that is, you try to encourage this person a little. (Rosa, user)

Furthermore, everyday mundane interactions were also a way to identify changes in other users' daily routines and ask them or notify facilitators if anything unusual was noticed. Maria explains how this worked in her "neighborhood" channel:

> There is a group of four or five people with whom we follow each other. What is more, we have our phone numbers... I have their numbers, and we talk by phone. Sometimes, one of our tablets stops working, and then they call me... They call me, or I call them, "Is everything ok?" "What's wrong with you?" So sometimes, if you go a few days without knowing about someone you know, you worry if you hear nothing about her, don't you? Because, as I tell you, most of us are older people, and things happen to us. (Maria, user)

This informal chit-chat, thus, allowed them to read beyond the lines, connect with users who were having a bad time or struggling to cope with the situation, and find alternative ways to support them (that is, phone calls). When needed, these active users, primarily women, encouraged other users to share more personal information, emotions, and experiences of the pandemic and beyond.

Finally, the users also reported that mutual support was common within "friends" channels and with the closest ones through one-to-one private communications. As Rosario explained, they talked over the phone, on WhatsApp, or in their VinclesBCN friend group to look after each other:

> I call Josep privately, and we see each other. If it doesn't work or he doesn't hear me, then... I send him an audio message, and he does the same to me. Salvador and Agus, too. And Pilar and Dina, too. It's part of the "Family" group, let's say... We were so happy [before the pandemic], and now we are going to the "Family group." Those are the people… they are all like me: they go in a wheelchair, a walker, and that is how we are. (Rosario, user)

In short, the conditions of lockdown and distance activated many VinclesBCN users. Many used existing groups and tools to expand and diversify their participation. However, new dynamics and relationships were also generated. Combining entertainment, sociability, and support, users and professionals transformed VinclesBCN into a space of individual and collective resilience crucial to helping users cope with the pandemic.

4.2 For Whom Did VinclesBCN Become a Lifeline?

As we have seen, many users both benefited from the "tablet" and actively contributed to make it a lifeline during the pandemic. However, it is also true that this was

Table 4 Cross-tabulation of the type of users of the VinclesBCN digital public social service and the factors affecting use in Barcelona (in percentages of the 255 surveyed)

		Users Type of use during the pandemic		
Age		Never	Regular	Frequent
	60–69	9.8	8.3	6.2
	70–79	39.3	43.8	47.9
	80–89	42.6	43.8	18.3
	90–99	8.2	4.2	6.8
Gender* (p = 0.015, Fisher exact test)				
	Female	26.4	16	57.5
	Male	11.9	31	57.3
Educational background				
	No schooling	37.1	8.6	54.3
	Primary	24.5	17.6	57.8
	Secondary	21.1	21.1	57.8
	Higher	12	32	56
Length of membership				
	During the pandemic	34.7	20.4	44.9
	Before the pandemic	21.1	18.1	60.8
Perceived Health				
	Poor	33.3	19	47.6
	Regular	22.5	23.4	54.1
	Good	20.8	18.1	61.1
	Very good	30	10	60
	Excellent	18.2	9.1	72.7
Total				
		23.9	18.8	57.3

not the case for all the service users. In the following, we are interested in understanding the factors that affected service usage during the pandemic.

First, we examined gender differences in access, participation, and platform use. As Table 4 shows, there was a significant difference between the frequency of use in women and men (p = 0.015, Fisher exact test). There were no differences between women and men regarding the most frequent users (more than 5 users out of 10 for both genders). However, there were more women than men (26.4% versus 11.9%) among those who never used VinclesBCN during the pandemic. Women's usage was, therefore, more polarized: most women connected quite frequently (57.5%), but many women never used it (26.4%). Conversely, men used it more routinely (53% frequently and 31% regularly) but tended to have a more "passive" participation. For instance, more men than

women used the service but sent no messages (23.8% versus 13.2%).

Regarding the use of channels, there were more women (75.2%) who used the "neighborhood" channels than men (69.4%). Women said they used "thematic" channels more than men: 62.7% of women compared with 47.2% of men. Thus, we infer from these results that, content and activity-wise, the thematic channels were probably more aligned with women's preferences, as they were a majority of users.

Those who used VinclesBCN frequently were evenly distributed across educational levels, except among those with no schooling. Many older adults without schooling answered that they never used VinclesBCN during the pandemic (37.1%, equivalent to approximately 4 out of 10). In contrast, among those with higher education, only 12% answered that they did not use the service. Similarly, when we asked about the frequency of sending messages, 40% of those with higher education sent messages daily, whereas users with primary education were highly represented among those who never sent messages (24.5%). Therefore, the level of education appears to condition the frequency of use of VinclesBCN and the frequency with which messages were sent during the pandemic. This may be related to VinclesBCN participation, which requires written or communicative skills that may be more present in people with specific employment or higher educational backgrounds.

Another relevant factor is the time of enrolment in the service. We distinguished between those who enrolled in VinclesBCN before the first lockdown (14 March 2020) and those who signed up after 29 March 2020. When questioned, 34.7% of those recently joined VinclesBCN had never used the service. In contrast, many who joined before the pandemic were among the most frequent users (60.8%). This is consistent with what users and professionals said in the interviews. Due to the restrictions, newer users could not receive face-to-face training. Apart from hindering their technological training, this affected their chances of having face-to-face meetings with other users and making important contacts and friendships for later online interactions.

The frequency of use of VinclesBCN was also related to the respondents' self-reported health. Of the survey respondents, 33.3% who reported poor health did not use VinclesBCN. This percentage is much higher than expected, and it indicates that it is more common to find people with "excellent health" (72.7%) or "very good" and "good health" (60% and 61.1%) among frequent users.

Regarding users' perception of loneliness, there are significant differences in the loneliness index between those who used VinclesBCN and those who did not. The average for the former is significantly lower than that for the latter (mean = 2.6, SD = 2.6 and mean = 2, SD = 2.3; $p < 0.05$). We can soundly say that people who did not use VinclesBCN tended to feel lonely during the pandemic. However, we cannot establish the relationships between the two variables. There were more non-users among those who responded that they "sometimes felt that they lacked companionship," "often felt isolated from others," or "alone" often or sometimes. Similarly, fewer users who said they "felt isolated" and "lonely" used it.

Finally, we also asked about emotional well-being. In general, the respondents did not show signs of depression. The test sets the threshold at a score of 2 or more. The respondents had a lower score: average 1.81, SD 0.8. However, comparing the users who used VinclesBCN with those who did not, we could observe differences: the former scored 1.72 (average 1.72, SD 0.944), and the latter scored 2 (average 2 SD 1.07). This shows that more people who did not use VinclesBCN exceeded the 2-point threshold and, therefore, had a lower mood. So, non-users tended to have a more depressed emotional state and more feelings of loneliness and isolation than VinclesBCN's users.

Thus, the second main survey result describes those users who did not use the service during the pandemic. Not using VinclesBCN was associated with a higher perception of loneliness, lower mood, and worse self-reported health, as well as being a woman, being new to the platform, and having lower education levels than regular or frequent VinclesBCN users. The study did not allow us to establish a cause-and-effect relationship or the direction of the relationship. Further research will need to delve into these.

5 Discussion

The analysis foregrounds how, why, and for whom VinclesBCN became a lifeline during the pandemic. "The tablet became a last resort" for many users because service social workers, but mostly the most active users, adjusted and reshaped the service to provide entertainment, socialization, and social support in a difficult situation. This agentic role of users challenges the ageist images of older adults as technological "laggards" (Rosales et al. 2023), intrinsically vulnerable to disasters (Aldrich and Kyota 2017), and particularly to the COVID-19 pandemic (Higgs and Gilleard 2022). It also draws attention to how little the digital role of older people in supporting others is considered, particularly in crises and disasters (Kamalpour et al. 2020; Nurain et al. 2021; Lee et al. 2022).

The pandemic lockdown and restrictions introduced new priorities to the service and its users. Service social workers were overwhelmed by new, demanding situations such as emotional distress, boredom, or sadness. For many users, especially those with a busy social life, principally outdoors, the pandemic drastically disrupted their everyday lives. In such a context, the app became crucial

for providing online social connectedness, information, and support to older adults at risk of feeling (even more) lonely and isolated as they stayed alone in their homes. Importantly, many users, mostly older women, took the lead and contributed significantly to enhancing VinclesBCN as a closer, more entertaining, and supportive online community, particularly in uncertain times. It particularly strikes the role played by entertainment. Through sharing games, films, and songs, the platform became a space to disconnect and protect themselves from pandemic-induced stress (Derrer-Merk et al. 2023). Through memes and messages of "good morning" and "good night" (Chung et al. 2021; Hebblethwaite et al. 2021), users hanged out with others, distracted themselves, and set aside worries, fears, anxieties, or uncertainties (Whitehead and Torossian 2021). These practices contributed to sustaining a "careful co-presence" (Alinejad 2019) that, despite being remotely situated, allowed them to share a sense of togetherness, sharing everyday experiences, and open up conversations with other people (Beneito-Montagut and Begueria 2021). This was crucial for many people to maintain and expand their connectivity and give or receive support (Brooks et al. 2022). This dynamic also facilitated the reception of new people or the setting of relationships and support among people who did not know each other or had barely met because they belonged to different neighborhoods, groups of friends, or thematic channels. Finally, it facilitated the identification of individuals needing companionship, comfort, or more specialized support (Yu et al. 2023).

In the literature on disasters, we found additional evidence of the role of entertainment in fostering resilience, from works highlighting the role of radio (Hugelius et al. 2019) to the role of gamification and digital games (Solinska-Nowak et al. 2018). Also, in the case of older adults, the importance of leisure and activities such as watching online videos, playing computer games, and listening to audiobooks and music has been emphasized in building resilience (Brooks et al. 2022; Clayton et al. 2023). Whitehead and Torossian (2021) reported how older people found joy and comfort by maintaining valued relationships through online interactions and increased their engagement in hobbies. The pandemic was, for many, an opportunity to explore other forms of leisure and simple pleasures, facilitating social engagement at a family and community level (Chung et al. 2021) and offering an escape from mainstream media that were reporting 24/7 depressing news about the pandemic (Derrer-Merk et al. 2023). Our results contribute to this discussion by showing that entertainment was crucial to fostering social connectivity, distraction, care, and support during the pandemic. This is significant in a platform that privileges more conversational, experiential, and audio-centered interactions. We know this from a participant observation conducted in the service during the pandemic (López-Gómez and Rodríguez-Giralt 2024). Audio messages and video calls were usually—socially and infrastructurally—privileged to promote and establish social bonds among users. However, in a situation of stress and offline social life deprivation, conversational and personal messages became more demanding. In other words, in pandemic times, the usual functioning of the service involved more relational, emotional, and infrastructural work, mostly for users. In contrast, posting phatic messages with positive and inspiring messages and sharing hobbies, films, and songs became less demanding and, thus, more accessible.

Our research also showed that as the pandemic persisted, entertainment became increasingly prominent. This finding also underscores the importance of significant modulation work, primarily assumed by professionals and older women, of the socio-affective and temporal dimensions of the disaster itself. With a prolonged crisis, particularly affecting older adults feeling lonely, VinclesBCN users found "shelter" in entertainment to escape pandemic-related stress and simultaneously prepare for an everyday life associated with a longer and slower disaster (Anderson et al. 2020; Knowles 2020). Similarly, Verhage et al. (2021) showed that older adults' coping strategies are complex, in which we find individual and collective factors and characteristics of the event itself. Strategies employed in VinclesBCN show this socio-affective dimension of disasters and the role entertainment can play in coping with long and uncertain crises.

Finally, the pandemic was a circumstance that activated a majority of VinclesBCN users. However, as our research showed, this engagement was not uniform across all users. Non-use of VinclesBCN was associated with a higher perception of loneliness, lower mood, worse perceived health, being a woman, a recent user, and having lower education levels than VinclesBCN users. This is consistent with findings from other studies. For instance, Beardmore et al. (2023) sustained that preexisting family or friendship-based social relationships are crucial for maintaining a sense of coherence and belonging to groups and places in times of disruption, loss, and uncertainty. Derrer-Merk et al. (2022) showed how the lockdowns brought not only mental health issues to the fore but also impacted the physical health of many older adults. This, in turn, significantly affected older adults' proactive coping and adaptation strategies during the pandemic (Pinazo-Hernandis et al. 2022). Also, Conroy et al. (2020) noted that providing equipment, training, and guidance is necessary to make emergency digital interventions accessible and usable by older adults. Ultimately, while we cannot establish causal relationships, these factors underscore the need for future research to delve deeper into the relationship between older people's digital connectivity and resilience in disaster situations.

6 Conclusion

VinclesBCN is an interesting case for further exploring the role of older adults in disaster situations, particularly in understanding the relationship between digital connectedness and collective resilience. Our study shows how and for whom VinclesBCN became a lifeline during the pandemic. In the context of lockdown and restrictions, it was vital to maintain emotional bonds and social relationships with friends, neighbors, and family members. It also provided a space for closeness, support, and solidarity in need. Above all, digital entertainment was crucial for distraction and protection from fear, uncertainty, and isolation, particularly in a longer and slower crisis such as COVID-19, in which older people were constantly framed as vulnerable. In such a context, entertainment became a more recreational, accessible, and emotionally attuned form of connectivity.

These results underscore the digital agency of older adults in disaster situations and counteract the more ageist images of them as technological "laggards" intrinsically vulnerable to disasters, particularly to the COVID-19 pandemic. However, the article also indicates that the digital connectivity of older adults is associated with several factors, such as gender, perceived health and loneliness, education, time of enrolment in the platform, or prior social connectivity. These findings are essential for the debate surrounding "emergency" digital interventions that emerged during the pandemic. As our research proved, it is crucial to complexify our approach to digital connectivity among older people and understand the multiple factors that facilitate or hinder the participation of older adults on a platform like VinclesBCN. All these are key elements in considering more inclusive and resilient digital interventions to support older adults in crisis and disasters.

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