

# My Home Quarantine on an App: A Qualitative Visual Analysis of Changes in Family Routines During the COVID-19 Pandemic in Chile

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#### Abstract

This article presents original findings from a longitudinal qualitative study on changes in individual and family life associated with safety and health measures implemented during the COVID-19 pandemic in three regions of Chile. We developed a methodological approach based on multimodal diaries in a mobile application, in which participants submitted photographs and texts to express changes in their daily lives under residential confinement. Content and semiotic visual analyses show a significant loss in instances of collective recreation, partially compensated through new personal and productive activities performed at home. Our results suggest that modal diaries serve as potential tools to capture people's perceptions and meanings as their lives go through exceptional and traumatic times. We assert that using digital and mobile technologies in qualitative studies could allow subjects to actively participate in the co-construction of fieldwork and produce quality knowledge from their situated perspectives.

**Keywords** Multimodal Methods · Mobile Application · Visual Analysis · Everyday Life · COVID-19

#### Introduction

The COVID-19 social, economic, and public health crisis has imposed formidable challenges in the organization of social life and the functioning of people's daily routines. Since the coronavirus outbreak, families and family members have faced economic hardship, physical and mental health issues, and household and family transformations at an unprecedented rate (Pišot et al. 2020). Prolonged quarantines,





school closures, and job losses have further contributed to the breakdown of individual and family projects and the erosion of their intimate relationships. In addition, the dramatic increase in domestic and care work has enlarged the burden on women in families with dependent persons and young children (Averett 2021; Power 2020).

Qualitative inquiries can make significant contributions to a growing body of knowledge on the social and family realities affected by the COVID-19 pandemic. Qualitative approaches are unique in their capacity to capture and understand "how people make meaning and sense of health and illness" (Teti, Schatz, and Liebenberg 2020). Qualitative methods and techniques allow participants to "express themselves" and to share their particular and "complex experiences" in dealing with the many economic, social, health, and psychological impacts of the ongoing pandemic (Tremblay et al. 2021). However, conducting qualitative studies during the pandemic presents distinctive methodological challenges. In this context, critical features of research designs and procedures are dramatically transformed, thus reconfiguring the standard praxis of qualitative fieldwork. Home confinement, lockdowns, and other government health and safety measures impose significant barriers to accessing and contacting participants and seeking informed consent to collaborate in research (Rahman et al. 2021). Physical and social distancing implies that researchers must devise alternative strategies for building trust and creating rapport in the absence of faceto-face personal interaction. These techniques often involve using digital and mobile technologies and interacting with participants in physical-digital environments (Tremblay et al. 2021), all of which demand specific methodological and technological adaptations (Muskat et al. 2018). From the participants' point of view, economic hardship, mental distress, and other physical and health conditions can affect their willingness to actively engage in research (Faircloth et al. 2020). Time constraints due to the urgency of the pandemic are also an impediment to conducting long-term, data-rich qualitative studies (Vindrola-Padros et al. 2020).

This article develops a methodological approach to address the main challenges of conducting qualitative research to investigate the impact of the COVID-19 pandemic on family lives and experiences. It displays the productivity of a multimodal qualitative design to capture changes in daily routines based on longitudinal fieldwork with families in three regions of Chile. From September 2020 to January 2021, we followed 38 lower-middle, middle, and upper-middle-income families with children during the coronavirus public health crisis. The results in this work come from an analysis of week-to-week programmed activities in a mobile application (Indeemo), where participants submitted images about their individual and family lives during home confinement. We applied visual content and semiotic analyses of pictures to reveal patterns of themes and semiotic resources used to portray family experiences and changes in daily lives.

Our contribution is both methodological and substantive. Methodologically, we show the productivity of a mobile application in capturing and eliciting how families and family members represent and signify changes in their daily lives during the pandemic. We asked participants to send pictures reflecting meaningful activities they stopped doing due to the pandemic and activities they had incorporated into their routines. We argue that using the Indeemo app as the primary methodological device redefined the boundaries of our fieldwork, as subjects had a great agency to select



what to show and what to hide from our observation. Furthermore, the format of open and flexible tasks adapted to our subjects' daily schedules allowed them to participate in the construction of visual evidence. Substantially, the content visual and semiotic analysis revealed a significant loss in instances of collective recreation, which participants partially compensated through incorporating new repertoires of personal and productive activities at home. We found that homes—signaled as pictures from the inside—have assumed new, multifaceted meanings during confinement.

The remaining of this article is organized as follows. In the first section, we summarize some of the main challenges in conducting qualitative research in times of COVID-19, highlighting the recent digital turn in qualitative fieldwork and the use of information and communication technologies. The following section introduces our methodological approach and the adaptations we devised to address some of the challenges posited by the pandemic. Then, we present the results of content and visual analyses of posts submitted by our participants through multimodal diaries in a mobile app. Finally, the last section analyzes the implications and limitations of our methodological approach in employing digital and mobile technologies in qualitative social research.

# Doing Research Through a Mobile App

#### Conducting Qualitative Research during a Pandemic

There is an emerging consensus within the policy and scholar communities that qualitative and context-sensitive knowledge is critical in informing public policies and government measures during public health crises (Teti, Schatz, and Liebenberg 2020; Vindrola-Padros et al. 2020). Scholars and policy experts have pointed out that qualitative evidence is key to understanding how people and communities make sense of public health and social measures and how individuals and families experience and act on the consequences of a global pandemic (Schatz et al. 2013). Qualitative contributions are especially relevant for checking common behavioral assumptions in epidemiological models (Palinkas 2014), foreseeing unexpected outcomes of health and safety restrictions (Bascuñan-Wiley, DeSoucey, and Fine 2022; Siu 2016), uncovering the needs of vulnerable populations and medical and task forces (Chafe 2017; Godbold et al. 2021; Huang et al. 2021), and helping engage communities and stakeholders in building public health and social interventions (Abramowitz et al. 2015). The nuances that depth descriptions, local knowledge, and interpretative analyses provide on people's experiences and meanings allow decision-makers and health authorities to design and implement action plans tailored to specific population groups, especially those affected disproportionately by the pandemic and its economic, social, and health consequences (Averett 2021; Fine and Abramson 2020; Power 2020).

Despite the potential contributions of systematic qualitative evidence, conducting social studies during public health crises poses unique methodological challenges (Rahman et al. 2021; Tremblay et al. 2021). First, access to the field and many critical steps in data collection have changed significantly since the COVID-19 outbreak.



Direct contact with individuals and families is infeasible mainly because of government and safety restrictions (Fine and Abramson 2020; Howlett 2022). Prolonged lockdowns and limitations in the movement of people make it impossible to reach families and their members in their "natural" social contexts. The restrictions also affect researchers, who are forced to do research "from home," deprived of physical immersion in the field (Góralska 2020). Secondly, building trust and rapport with participants in physical and social isolation conditions is increasingly difficult. A standard task in qualitative studies is to produce comfortable social interactions with subjects as soon as entering the field, which implies building an open relationship with informants in a way that, ideally, they "forget that the observer is there to do research" (Taylor, Bogdan, and DeVault 2015, 55). However, establishing rapport and building trust mutates in the absence of face-to-face, personal interactions. Indeed, during the pandemic, scholars who seek to get to know people and their intimate lives need to devise alternative and innovative approaches to gain people's acceptance and access to their spheres of intimacy.

The emergency of the pandemic also puts pressure on research teams to produce timeliness knowledge, which may shorten the typical time spans for building rapport and producing in-depth qualitative analysis and interpretation (Vindrola-Padros et al. 2020). Moreover, even where contact is made and trust gained, researchers must evaluate the economic and mental health burden the pandemic has placed on their participants—particularly those in situations of vulnerability and dependency (Fair-cloth et al. 2020). Finally, research and recruitment teams must rely heavily on digital technologies for synchronous and asynchronous interactions (Tremblay et al. 2021). This fact often implies using computer-mediated communication in physical-digital environments, a trend that has characterized the digital turn in qualitative research under the COVID-19 pandemic (Reñosa et al. 2021).

#### The Digital Turn in Qualitative Studies

The digital turn in social research during the COVID-19 pandemic is entangled with epistemological and methodological debates that challenge the conventional modes of conducting qualitative and ethnographic inquiries. The first debate is about the transformation in the logic of fieldwork and, specifically, the canonical notion of the ethnographic "field." As mentioned above, public health and physical distancing measures prevent researchers from "being there" with their participants in the context of their daily lives. This fact alters the standard practice of fieldwork as a process that happens in concrete and well-bounded fieldsites (Howlett 2022; Silverman 2020). Two decades ago, Marcus (1995) discussed the assumption that qualitative research occurred exclusively in single-site locations and highlighted the value of ethnographies operating in multiple places of observation and participation. The emergent concept of "multi-sited fieldworks" allowed researchers to account for "the multi-sited nature" of their participants' lives—a trend that has been expanded through works that seek to capture not only the dynamic settings of daily interactions but also the life in virtual and online spaces (Hallett and Barber 2014, 313).

Ethnographic approaches to digital media and multimodal techniques have also expanded the concept of field to encompass emergent "field-events," where fields



are actively co-created by researchers, participants, and information and communication technologies (Crabtree and Rodden 2008). A fundamental assumption in these works is the difference between place and space. The field site is no longer posited tied to situated geographical and social places but open-ended and dispersed spaces (Góralska 2020). Such "spaces" are portrayed as "spatio-temporal events" (Ahlin and Li 2019), networks built by researchers and participants that connect a plethora of physical, virtual, and imaginary spaces (Burrell 2009).

The reconceptualization and expansion of the field site come hand in hand with the intensive use of information and communication technologies (ITCs) and computer-mediated communications (CMC) in social research (Hallett and Barber 2014). ICTs and CMS shape the data researchers gather and thus impact what researchers are afforded to see and what counts as valuable interactions in qualitative and ethnographic studies (Ahlin and Li 2019). Crabtree and Rodden (2008) proposed the concept of "hybrid ecologies" to refer to these "mixed reality" environments that merge multiple physical and digital spaces. Researching and collecting data in these emergent environments would be characterized by "fragmented interactions" distributed through mechanisms and practices between the physical and the digital. Technological and digital devices create a "co-presence" between researchers and participants who do not share a physical location, allowing subjects to actively construct "a new digital and socially significant space" for communication and coordination (Howlett 2022).

As we will see below, our methodological approach built on the principle of the co-creation of field-events through the interaction between researchers and participants within multimodal diaries. We argue these diaries, based on activities specifically designed on a mobile app, allowed us to produce a technologically mediated co-presence with our subjects which was both feasible and meaningful during the pandemic.

#### **Researching Changes in Family Routines in Residential Confinement**

The COVID-19 pandemic constitutes a public health, social and economic crisis that has disrupted family routines and people's everyday lives worldwide (Pišot et al. 2020). In Chile, the outbreak of COVID-19 began in March 2020, with a rapid spread that prompted the government to impose the first lockdown in Santiago in late March (Ministerio de Salud 2022). During the first term, contagious rates increase gradually throughout the country. Except for essential jobs, all educational and job-related activities were transferred to a remote mode, mainly through teleworking and online education. In July 2020, government and health authorities developed a plan (Plan paso a paso) based on dynamic lockdowns that regulate the economic, leisure, mobility, and meeting activities authorized in specific cities and regions. Deaths related to COVID-19 in the country were significant, with a total of 32,489 deaths by June 2021 (Aguilera et al. 2022), with the cities covered in this article—Santiago, Concepción, and Valparaíso—concentrating the highest numbers of casualties. However, Chile represents a success story for vaccine availability and implementation of its vaccination program, with one of the highest vaccine rollouts in the world (Aguilera et al. 2021; Castillo et al., 2021).



To capture the impact of the pandemic on family routines and intimate relationships in Chile, we sought to understand changes in productive and non-productive activities and pastimes. Disruptions to daily routines occur in response to health and safety restrictions adopted by health authorities and the complex ways in which people comply, adapt, and resist those measures. Moreover, because impacts might vary substantially between different families and family members, we proposed a multimodal qualitative research design to investigate changes and interruptions in family routines based on the activities that individuals have had to give up and those they have decided to incorporate into their daily lives.

# **Methodological Approach**

#### **Methods and Techniques**

Beginning in June 2020, we participated in an International Consortium encompassing research teams from ten countries with a wide range of socioeconomic and cultural realities. The project constituted a comparative cross-country enterprise to investigate how people in diverse contexts understood and responded to government guidelines around the COVID-19 pandemic and what impact these measures had on family life and individual subjectivities. Our team in Chile brought researchers from different disciplines in the social sciences<sup>1</sup>. We designed a qualitative longitudinal study to explore how families and family members coped with the challenges posed by COVID-19 during the most critical months of the pandemic. From September 2020 to January 2021, we followed 38 families<sup>2</sup> and gathered information on how lockdowns and other health and safety measures impacted their everyday life and how their family and personal relationships changed during this period.

We implemented adaptive strategies to address some of the most pressing challenges of conducting qualitative research during the pandemic (Table 1). For selecting participants, we used a purposive sampling of families that could constitute information-rich cases to study changes in everyday life during the pandemic (Palinkas et al. 2015). Families had to have at least one school-age child and reside permanently in one of the regions covered by the study. We also ensured that selected cases represented a range of socioeconomic backgrounds—including households of lower-middle, middle, and upper-middle income<sup>3</sup>—and family structures—including families from nuclear, extended, and single-parent households. The recruitment of participants worked through decentralized research teams based in six universi-

<sup>&</sup>lt;sup>3</sup> The definition of socioeconomic profiles was adapted from the methodology developed by the Chilean Association of Market Researchers (Asociación Investigadores de Mercado 2019), in which households are stratified according to their per capita income, educational attainment, and category of occupation.



<sup>&</sup>lt;sup>1</sup> Local research teams were organized for each region, with central coordination in Santiago. The teams were constituted by researchers with backgrounds in social anthropology, psychology, and sociology.

<sup>&</sup>lt;sup>2</sup> This article includes findings based on posts submitted by 37 participants from 25 families from Santiago (eight families), Valparaíso (eight families), and Concepción (nine families).

**Table 1** Methodological Challenges and Adaptive Strategies

Challenges	Adaptive Strategies
Contact with participants	Working through decentralized research teams with local knowledge, fieldwork experience in communities, and research assistants acting as gatekeepers.
Gaining access to the field	Adopting a multi-method approach and different techniques to gather data and continuously monitor families and participants.
Co-creating a field	Introducing the Indeemo mobile app as an interface for participating and submitting posts within specific tasks.
Flexible conditions for participation and fieldwork	Implement a non-intrusive approach that relies heavily on multimodal diaries tailored to the times and requirements of the participants.

ties in northern, central, and southern Chile<sup>4</sup>. Each team had local knowledge of their regions and vast experience conducting fieldwork in their communities. We contacted gatekeepers, people who belonged to the selected regions and had deep connections with their communities and neighborhoods, to establish contact with local families. Research assistants helped to verify that families met the selection criteria and maintained regular contact with family members throughout the project by phone and the Indeemo app.

The physical distancing imposed since the virus outbreak meant that all communications between researchers and participants had to be done remotely, including reading and signing informed consents<sup>5</sup>. Once a family became part of the study, a mobile phone with internet data was provided for contact and participation through the Indeemo app. We used Indeemo as a non-intrusive methodological device for recording multimodal diaries of family trajectories during the pandemic. Considering the difficulties of accessing the field and building trust and rapport with families and individuals, we deployed different techniques that allowed us to connect with people and to gather information gradually, without much intrusion into their daily lives. These techniques included a quantitative questionnaire to draw a sociodemographic profile of each family, two open-ended family interviews to get a qualitative overview of their lives during the pandemic, and one in-depth interview with heads of households to get additional insights relative to their experiences. All these techniques allowed us to build a general understanding of the field and provided contextual information about families and their backgrounds and trajectories. Data

<sup>&</sup>lt;sup>5</sup> To participate, each family member had to sign an informed consent. In addition, for participants under 18 years of age, a responsible adult had to sign an additional informed consent. Families did not receive any monetary compensation for participation, which is not allowed in social research projects funded by the Chilean government science agency. Furthermore, material incentives for participation in similar studies have not effectively overcome participants' practical and time constraints during the pandemic and could even give rise to perverse incentives (Faircloth et al. 2020).



<sup>&</sup>lt;sup>4</sup> This article analyzes three of the four original regions included in the project: Santiago, Valparaíso, and Concepción.

production was also adapted to the specific conditions of the participants and subject to their time and technological needs<sup>6</sup>.

#### **Multimodal Diaries and Visual and Semiotic Analysis**

Mobile technologies, specifically smartphones, have become essential data collection tools in qualitative studies and proved a viable alternative for field research during the pandemic (Faircloth et al. 2020). Using smartphones to collect real-time information can help researchers contact disadvantaged and hard-to-reach groups (Rebernik, Favero, and Bahillo 2021; Sugie 2018). Moreover, the ubiquity of smartphones makes it possible to break the physical and digital divide by allowing researchers and participants to co-build spaces for interaction and communication (Salganik 2019).

One of these digital devices is Indeemo, a mobile application for customer-oriented marketing and designing research<sup>7</sup>. Many of its functionalities and features have been tailored specifically for digital and mobile ethnographic research and mobile diary studies (Kruyen 2020; Read 2019). Specifically, Indeemo contains a dashboard and an interactive mobile application to communicate with participants through text, images, video, and audio in real-time, allowing researchers to maintain regular contact with subjects and create a channel free of the distractions and "noise" of social networks.

In our study, participants used Indeemo as a platform to build multimodal diaries by recording testimonies of their personal and family experiences during the pandemic. The recording of multimodal diaries throughout the study gave a sense of continuity to the fieldwork, otherwise unfeasible due to the physical distancing and other safety measures adopted by health authorities. As mentioned above, multimodal diaries were tailored to people's time and resource needs. The fact that people could access the mobile app and submit their posts at their own pace and time gave them the freedom to participate in the study at will. Furthermore, flexibility and adaptation to people's necessities and time schedules allowed us to capture the irregular and unstable experiences that characterized routines in times of extreme uncertainty. By capturing changes in daily routines as they occurred, multimodal diaries provided rich evidence of how participants perceived, signified, and evaluated these changes vis-à-vis the evolution of the country's economic, social, and health situation.

To organize the composition of diaries, we designed nine activities sequenced over eight weeks<sup>8</sup>. In each activity, we asked participants to submit images accompanied by a short explanatory text or video<sup>9</sup>. The activities were designed to elicit

<sup>&</sup>lt;sup>9</sup> Participants were trained in the main application functions, including submitting photos, videos, texts, and voices to weekly tasks. Participants' skill levels and familiarity with smartphones were quite good,



<sup>&</sup>lt;sup>6</sup> Attrition only occurred in two of the original 40 cases, specifically in families where members had been infected or were experiencing difficulties, so their participation could burden them.

<sup>&</sup>lt;sup>7</sup> Indeemo was provided pro-bono for the project.

<sup>&</sup>lt;sup>8</sup> The multimodal diary began with an activity that required a brief presentation by the participants. Then, eight activities appeared in the app during the eight-week fieldwork. The activities were designed to elicit a wide range of experiences and meanings from everyday life during the pandemic: "A day in a pandemic," "Lockdown," "My responsibilities," "Finding my space," "Taking care of COVID – 19," "My family (1)," "My family (2)," and "Something I wish to share."

responses by giving the participants general instructions. For example, the activity of the third week asked participants to submit two photos of something they had stopped doing due to the lockdowns and two photos of something new that the pandemic had allowed them to do, accompanied by comments on the meaning of these pictures. Once a participant submitted her assignment, the researchers were notified via the app and could comment on her post in real-time, requesting clarifications or extensions if necessary.

Multimodal diaries provided massive visual data, with 122 images submitted solely for the task analyzed in this article. Our approach to these materials was broadly framed in the socio-semiotic perspective, which focuses on how people produce meanings in social interactions by employing various semiotic resources in multimodal messages (Kress 2009; Leeuwen 2005). From this perspective, it is crucial to consider the relationship between the digital devices (in this case, mobile phones), the technological platform for participation in the study (Indeemo), the design of the task with the resources contemplated and available for participation (images and texts), and the production of multimodal messages by the participants. The digital artifacts (Morgan and Kynigos 2014) and social media (Moschini 2018; Poulsen and Kvåle 2018)—which the Indeemo platform emulates—represented semiotic technologies that contextualized the production of multimodal messages and performed genres and styles for communication. For example, our participants seemed to have represented situations in modal diaries by executing the popular selfie style (Vannini 2007).

Visual content analysis focuses on what is represented in a visual artifact, and it has the advantage of being easily quantifiable (Bock, Isermann, and Knieper 2000). We performed the analysis in two steps. We first coded all the images posted by the participants, and when a short text described an image, we used texts as inputs for the coding. Coding was performed emergently, following a method of constant comparison and triangulation with interpretants. For the generation of the categories, we had in view previous works of visual content analysis, such as those of Collins et al. (2017), Bell (2000), and Luttrell (2010). In a second step, we carry out a socio-semiotic analysis of the categories and codes resulting from the visual content analysis, also making comparisons according to the main socio-demographic categories considered in the study. For this analysis, we followed the proposal of Kress and Leeuwen (2020) in the analysis of visual grammar. This procedure consists of a toolbox guided by sensitivity towards the resources that, from all the possible semiotic resources available, acquire relevance in the use that participants make of them to produce meanings and senses. We also considered how the task entrusted to participants, the features of the Indeemo platform, and the use of mobile phones shaped the semiotic resources deployed by our participants.

and follow-up interviews with users did not suggest problems with the functionalities of Indeemo or the tasks programmed.



Region	Families	Participants	Groups		Sex		Family Structure		
			Adults	Young People	Men	Women	Nuclear	Extended	Single- Parent
Santiago	8	12	8	4	7	5	6	3	3
Valparaíso	8	9	5	4	2	7	7	1	1
Concep- ción	9	16	7	9	4	12	7	6	3
Total	25	37	20	17	13	24	20	10	7

Table 2 Participants in Modal Diaries

# My Residential Confinement on an App

# The task in the Multimodal Diary "My Quarantine"

How did family members represent changes in their daily activities during the pandemic through images and photos elicited by tasks programmed in a mobile app? What spatial, temporal, and social categories did they use to represent changes in their individual and family daily activities? How did these categories vary by socioeconomic status, gender, and age of participants? This section describes the activities reported by 37 individuals belonging to two demographic groups, adults (20) and young people (17). Our participants were 24 women and 13 men and belonged to families from nuclear (20), extended (10), and single-parent households (7) in cities of three major urban areas: Santiago, Valparaíso, and Concepción (Table 2). Most participants belonged to families from middle-high (38%), middle (24%), and middle-low (32%) socioeconomic backgrounds, with a small percentage of participants coming from families with low socioeconomic status (5%), and most of the families belonged to the nuclear structure (54%).

We coded each of the 123 posts submitted by the participants in a task named "My Quarantine" where we asked subjects to submit pictures that represented something valuable for them that they stopped doing because of the residential confinement in the pandemic and pictures of something new and meaningful that staying at home had allowed them to do<sup>11</sup>. Participants submitted 3.3 posts on average for this task between November 2020 and January 2021. It must be noted that we did not provide a specific list of activities that were affected by the lockdown and other safety and health measures during the pandemic. Instead, we sought to elicit meaningful experiences from people's points of view and asked them about what had changed in their family and intimate lives. In doing so, participants were free to choose what they felt was most relevant, significant, and pertinent to share with us concerning their daily lives under residential confinement.

<sup>&</sup>lt;sup>11</sup> We encode every post and photo submitted through the Indeemo app. We use 23 categories to describe the type of images, their content, frame, genre, and other semiotic elements in pictures.



<sup>&</sup>lt;sup>10</sup> The term "quarantine" was commonly used in Chile to refer to mandatory residential confinement.

Genre of activities	Forgone activities		Incorporated	l Activities	Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Collective recreation	33	50%	10	18%	43	35%
Personal recreation	11	17%	11	20%	22	18%
Productive	4	6%	10	18%	14	11%
Affective sociability	9	14%	9	16%	18	15%
Schoolwork	5	8%	6	11%	11	9%
Care and domestic work	2	3%	6	11%	8	7%
Community engagement	2	3%	4	7%	6	5%
Total	66	100%	56	100%	122	100%

Table 3 Post Submitted by Genre of Activity

#### Changes in Daily Life as Forgone and Performed Activities

Our visual content analysis classified posts into two main categories: activities that people abandoned or were unable to perform ("forgone activities") and new or recovered activities that people carried out during their residential confinement ("incorporated activities"). As we will see below, this distinction represents the different balances the participants kept between what they had lost and gained during the pandemic and informed us how families managed their daily life under the exceptional circumstances of residential confinement.

We also coded each post inductively according to the objective or purpose of the incorporated and forgone activity and then classified them into seven discrete categories: (i) productive, activities carried out for economic or productive purposes; (ii) care and domestic work, activities carried out for purposes of direct and indirect care of family members, including both the care of children or the elderly and the cooking, cleaning, and maintenance of the household; (iii) affective sociability, activities associated with intimate and social interactions, including spending quality time with family members, children, and significant others; (iv) personal recreation, activities carried out for individual recreation purposes, including the practice of sports, arts, and hobbies; (v) collective recreation, activities carried out for recreation purposes with others, including birthday parties, getting together with friends, and outings with family and friends; (vi) schoolwork, activities to fulfill educational duties, including school and college obligations; (vii) community engagement: activities carried out to work collaboratively with community members and other civil society groups.

Forgone and performed activities were reported with minor differences, with 66 and 56 posts, respectively (Table 3). Among the forgone activities, those related to recreation (collective or personal, 67%) and sociability (collective recreation and affective socialization, 64%) stand out. In most cases, the activities forgone used to be performed out of home, and, as we will see below, their abandonment is represented negatively as a loss. It is important to note that, although the pandemic altered productive activities and schoolwork, care, and household activities, the possibilities of sharing with significant others—friends and family—were the most prominent when posting about forgone activities. On the other hand, the activities incorporated into people's everyday lives were more balanced. The most representative categories were those of personal recreation (20%), followed by productive activities (18%),



Fig. 1 Indeemo Post, Task "My Quarantine"
Descriptive text: "I stopped doing sports." Young man, nuclear family, middle socioeconomic status, city of Santiago.



activities of collective recreation (18%), and affective sociability (18%). Less relevant were new activities associated with schoolwork (11%), care and domestic work (11%), and community engagement (7%). In this case, participants represented activities as compensations for the perceived loss in their daily routines, and many of them were performed at home.

Regarding the posts' visual content, participants often chose to portray forgone activities through a single object, a place without people, or a lonely person linked to the activity left behind. The choice of an object emphasizes the activity itself—for young people, most often sports. The empty place focuses on a location that can no longer be visited—generally, nature for adults and school or urban walks for young people—and pictures of lonely individuals are associated with visits that can no longer be made—generally to a relative.

The variety of semiotic resources present in pictures serves to express gender differences. Young and adult men tend to portray the changes in their pandemic experiences through images containing objects, usually accompanied by brief and concrete descriptive labels. For instance, a young man in Santiago submitted a picture of a bicycle, commenting that he had stopped doing sports due to the pandemic <sup>12</sup> (Fig. 1).

<sup>&</sup>lt;sup>12</sup> We required an additional explicit consent by participants for each of the pictures displayed in this article.



Fig. 2 Indeemo Post, Task "My Ouarantine" Descriptive text: "One of the things that I missed is to go out and meet friends. In my house there are several people, and there are two who are in risk groups (my grandmother and my father) and I think that has made us take better care of ourselves. It does not mean that I have not met or gone out with friends, but that the outings have been significantly reduced compared to normal times." Adult woman, extended family, middle socioeconomic status. city of Concepción.



While objects were also present in women's posts, women included more detailed descriptions of them, often linking pictures to feelings and emotions caused by the transformation of their daily lives. Especially among adult women, we found posts in which personal items appealed to their emotional transformations during the pandemic. In pictures and tags, adult women continually referred to other people, particularly those with whom they share close ties: husbands, children, friends, and grandparents. For example, in a post by a woman from the city of Concepción, the participant transmitted the loss of socialization through a partial representation of people, framing, in a top-down perspective, only the feet and legs of a group of friends (Fig. 2).

When people emphasize forgone activities associated with instances of sociability with others, two semiotic resources become relevant. The first is the preferential use of portraits or collective self-portraits with the presence of gazes directed toward the camera. The second is the management of salience in the figure-background relationship. Sometimes, the salience points to giving a leading role to the figure of the people, with the background acting as co-protagonist. For example, we received a picture where a couple was the central figure and a natural landscape performed as the background, representing a lost place for personal recreation (Fig. 3). In other cases, particularly in portraits of family and friends accompanying the participant,



Fig. 3 Indeemo Post, Task "My Quarantine"
Descriptive text: "I miss going out with my family without masks." Adult woman, nuclear family, lower-middle socioeconomic status, city of Concepción.



the background was less relevant, and the visual weight relied on the presence of people close to each other looking at the camera (Fig. 4).

The posts representing incorporated activities have distinctive visual resources and contents, which we coded inductively into four major themes. First, posts show the reappropriation of time and space within the home and the practice of "handmade" and learning activities. While some participants performed some of these activities for self-education and recreation, others linked them to business ventures. Secondly, a group of pictures reveals the intensification of online life and the use of digital technologies to connect people with the outside world for work, study, or socializing purposes. Third, many posts within the incorporated category refer to participants being able to share more quality time with their families. These pictures show how much people could take advantage of lockdowns and restrictions to recreate common spaces within their homes for recreation and socialization. Finally, we found the adoption of many health care practices to prevent the spread of the virus when it was necessary to leave and return home.

#### The In-house and Out-of-house Semiotic Distinction

As discussed above, using a mobile application in our research reconfigured the study's boundaries and how we co-created the fieldwork with our participants. For



Fig. 4 Indeemo Post, Task "My Quarantine"
Descriptive text: "Hang out with my friends, now we have to talk on Whatsapp or Facebook." Adult woman, extended family, low socioeconomic status, city of Concepción.



Table 4 Post Submitted by Place of Activity

Place	Forgone activities		Activities per	formed	Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
In-house	20	31%	41	79%	61	53%
Out-of-house	44	69%	11	21%	55	47%
Total	64	100%	52	100%	116	100%

researchers, new roles had to be negotiated, for the mobile phone and the Indeemo app acquired an essential role in the access and configuration of the field. Furthermore, participants had significant agency in defining the content of the materials provided by filtering what was perceived relevant to show and what was hidden from observation.

A pivotal distinction in understanding this logic was the difference between an inside and outside perspective in pictures. As we shall see, the posts show that life inside and outside was not diluted during the house confinement but semiotically reconfigured. This finding reaffirms the many adaptations in individual and family routines during the pandemic. Indeed, from a visual perspective, the prevalence of in-house and out-of-house activities speaks for continuities and discontinuities in our participants' everyday life (Table 4). For instance, the posts referring to forgone activities adopted, for the most part, an external perspective anchored in situations and actions out of the home (69%). This outside represents the memory of activities that had to be given up, and, for subjects, it connotes opportunities to escape from urban life to enjoy nature and natural landscapes—mountains, beaches, and forests. Likewise, we find many references to hanging out in open-air urban spaces, which



suggests the value of intra-urban experiences of nature, such as in parks and courtyards. Less frequently, some participants point to urban recreational spaces, such as places to dine out, the shopping center, the stadium, and the cinema. These places are primarily the settings for outings with friends and occasionally with family members. To a lesser extent, the exterior can be symbolized by streets, as in pictures where participants represent the catwalk as a space of personal freedom. Furthermore, and especially for young people, the surroundings of the school and its spaces are framed as this outside.

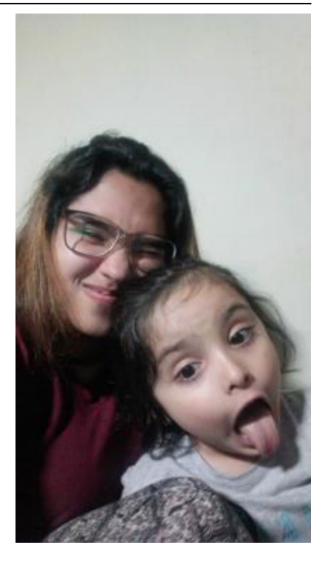
The use of images of the inside of the house to represent forgone activities is less frequent (31%). Specifically, participants use pictures in this category to illustrate special occasions they have missed, such as celebrating birthdays or receiving visits from relatives and friends. Activities that involve leaving home are also depicted through photographs in interior spaces, some directly alluding to the impossibility of leaving home and hanging out with friends and family or practicing sports. Conversely, in the representation of incorporated activities, there is a higher proportion of images of the inside (79%) relative to those of the outside of the house (21%). First, individual bedrooms take relevance for pictures inside the house, followed by the garden and shared areas such as the dining room, living room, and kitchen. The bedrooms host a variety of intimate activities, such as mothers and daughters embroidering, knitting, or taking care of each other. The bedroom also appears where online activities of interaction with the outside world occur, such as online games, videotelephony with friends, schoolwork, and work meetings through different digital platforms.

Second, the images in the front and backyards reveal the value the participants placed on being outside—now and outside within the confines of their houses. Front and backyards, where they exist, are associated with new activities such as planting and cultivating gardens. Other spaces and objects are adapted and become multipurpose, such as the tables in living rooms, dining rooms, and kitchens, where crafts are practiced, homework is done, or dinner is cooked and served. In contrast, participants rarely reported images of activities related to increased household chores during the confinement. Instead, they seem more interested in portraying their homes as malleable and multipurpose, especially for personal and collective recreation and social activities. In fact, the abundance of images of social recreation reveals that time at home was spent with family. Participants posted various family portraits and selfies where the gaze was directed towards the camera, with their faces conveying joy and sometimes grimacing (Fig. 5). Through these semiotic resources, the participants make us part of their family sharing and take us into their intimacy at home.

In the appropriation of time and space within the home to carry out new activities, those related to crafts and cooking had a special place. Most of these posts show recreational activities, learning new skills, and, for adults, productive enterprises. Specifically, female participants reported images of embroidery, knitting, weaving, cooking, and baking. In most cases, the craft is represented by its product, either as a work-in-progress or as a finished product (Fig. 6). Different semiotic resources seek to transmit vitality to what is represented: figures looking directly at the camera, hands photographed next to the handicraft, and objects in the process of being made along with tools and materials.



Fig. 5 Indeemo Post, Task "My Ouarantine" Descriptive text: "Other things that I have been able to do while in lockdown is to share much with my nephew... The same with my family, but I highlight being with my nephew more, since he is small - he is 5 years old - and this is an age in which they learn many things. We have been able to play and share more because I don't have to go to university, and he doesn't have to go to the kindergarten either." Young woman, extended family, middle socioeconomic status, city of Concepción.



Finally, home is the place to expand life online. It includes transferring activities previously carried out in person, such as working, studying, and holding social and recreational gatherings, to various digital platforms and devices. For young participants, recreational activities accomplished online before the pandemic also intensified, as we found through several posts related to video games. Semiotically, there are three distinct styles of representation of this immersion in online activities: representations of technological artifacts as examples of the activities, photographs of the subjects using the artifacts (usually a computer), and a novel style of screenshots of people interacting on an online platform, whether in work meetings, friends' meetings or in interest groups meetings, which could be acting as a replacement for the use of portraits and selfies in face-to-face contexts (Fig. 7).



Fig. 6 Indeemo Post, Task "My Ouarantine" Descriptive text: "One of the things I had always wanted to learn how to do were these crochet dolls. I never did it because I found it difficult, but now I took the time and with the help of my mother, who knows how to crochet, she guided me to make the dolls. This is a puppy that I will give to someone I love very much, for her birthday :)." Young woman, extended family, middle socioeconomic status, city of Valparaíso.



#### Discussion

The digital turn in qualitative and ethnographic inquiry during the COVID-19 pandemic has come hand in hand with the rise of information and communication technologies and computer-mediated communications in social research (Hallett and Barber 2014; Reñosa et al. 2021; Tremblay et al. 2021). This trend draws attention to the complex ways in which offline and online social lives interact, giving rise to hybrid ecologies and mixed reality environments embedded in people's everyday lives. In the ethnographic field, some authors have proposed going beyond narrow denominations such as cyberethnography, netnography, or virtual ethnography and embracing more comprehensive conceptualizations of ethnographic research through digital technologies—as in digital ethnography (Lane and Lingel 2022). Ethnographers and qualitative researchers must confront a "space [that] is now permanently both physical and virtual" (Small 2022, 480). The ethnographic field expands as it comes to integrating heterogeneous sites with open-ended and dispersed spaces (Góralska 2020). At the same time, digital ethnography fragments fieldwork experience in multiple and emergent field events co-created by researchers, participants, and digital devices (Crabtree and Rodden 2008).

The confinement during COVID-19 accentuated these dynamics by introducing abrupt disruptions into people's life and routines. As a result, we have seen the



Fig. 7 Indeemo Post, Task "My Quarantine"
Descriptive text: "What the pandemic has allowed me to do, in the first place, is to meet with the board of directors of the parent organization to which I belong, since before it cost us a lot due to time and coordination and now we can hold meetings at night, without interrupting our work as mothers and housewives." Adult woman, extended family, lower socioeconomic status, city of Valparaíso.



proliferation of socialization practices with various articulations and hybridizations between the "physical" and the "virtual," as in the study of digital commensality (Bascuñan-Wiley, DeSoucey, and Fine 2022). In that way, today's digital ethnographer faces the task of producing co-presence with subjects at a distance and articulating a "digital complicity" where trust is built in fragmented but intimate qualitative reports from participants using digital devices.

As in other qualitative studies conducted in the pandemic context (see, for example, the special issue of *Qualitative Sociology*, Volume 45, Issue 3, September 2022), our study undertook a multimodal approach based on adaptive strategies to address research obstacles in an ongoing multidimensional sanitary, social, and economic crisis. We intensively used digital technologies and the Indeemo app to contact, communicate, and interact with families and family members throughout the fieldwork.



Indeemo opened a window from inside families' homes. The weekly activities we programmed elicited personal accounts of experiences of changes in daily life under confinement. Our results show that this kind of multimodal diary has an enormous potential to obtain meaningful testimonies from what individuals and collectives go through in both regular and exceptional times. Moreover, our study supports the potential of using mobile applications for digital ethnographies, particularly specifically-built platforms that avoid the noise of social networks and can be applied in a wide range of post-pandemic settings.

Another advantage of using a mobile application for ethnographic fieldwork is the great flexibility and degree of freedom it grants to the participants. As discussed above, our subjects framed the field by deciding what to show and hide from our observation and how to package their communications. These decisions involved an active agency in producing and designing the field and its objects. Specifically, the structure of open activities, with minimal instructions and the possibility of providing photographs of the participants' choices, allowed subjects to select what they considered pertinent to the task. In that way, the field became, to a greater extent than in conventional ethnography, the creation of participants in their interaction with a mobile device.

Our study design also represented a significant challenge in establishing and interpreting the complex relationships between what was shown and hidden from our attention. This fact demanded a multimodal analysis that could capture the significance of the participants' different semiotic choices in the production of their testimonies. Indeed, our subjects' posts reflected a multimodal competence in the use of a variety of semiotic resources for expression, among them: the selection of visual content; the use of framing, angles, and salience; the direction of the gaze; and the use of styles of portraits and selfies. This repertoire of semiotic resources allowed participants to account for the transformations in their daily lives and the forms of adaptation they deployed during the confinement.

Finally, an issue that requires further examination is how these digital technologies interact with the choices of content and form in the subjects' testimonies. For example, in our study, the Indeemo app emulates some of the content we observe in the dominant genres and styles of social networks such as Facebook or Instagram. This pattern can be seen in the selfie genre that our participants used in the conventional form of self-portraits in states of amusement. However, our research design offered only a limited understanding of how these technologies shape the production, design, and delivery of multimodal messages in the creation of meaning. A promising line of research in this direction is integrating intertextual semiotic analysis and analysis of communicational conventions in social networks.

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