

Pandemic and techno-sociality modify the daily life of healthcare professionals

Pandemia e tecnossocialidade modificam o cotidiano de profissionais de saúde

La pandemia y la tecnosocialidad modifican el cotidiano de los profesionales de la salud

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ABSTRACT

Objective: to understand techno-sociality in the daily lives of personnel in primary health care and referral units during the COVID-19 pandemic. **Materials and methods:** this integrated, qualitative, multiple-case study of 47 health professionals was based on the Comprehensive Sociology of Everyday Life. **Results:** with the pandemic, many health actions were interrupted or adapted to the online format by using techno-sociality to conduct user groups, management meetings, training, health information searches, and communication with relatives and friends. Although health technologies and virtual social networks can be deployed in health care and have been widely used in the COVID-19 pandemic, they have proven unable to replace face-to-face contact. **Conclusion:** virtual social networks and technologies were strengthened during the pandemic, given their effectiveness in ensuring social distance, allowing safe care, facilitating the day-to-day work of health personnel and users, and the organization of actions in health services.

Descriptors: COVID-19; Technology; Online Social Networking; Primary Health Care; Activities of Daily Living.

RESUMO

Objetivo: compreender a tecnossocialidade no cotidiano de profissionais de saúde da Atenção Primária à Saúde e de unidades de referência na pandemia de COVID-19. **Método:** estudo integrado-qualitativo, por meio de casos múltiplos, fundamentado na Sociologia Compreensiva do Quotidiano, realizado com 47 profissionais da saúde. **Resultados:** com a pandemia, muitas ações em saúde foram interrompidas ou readaptadas para o formato *online*, mediante o uso da tecnossocialidade para realizar grupos com usuários, reuniões com a gestão, capacitações profissionais, busca de informações em saúde e comunicação com a família e amigos. Apesar de as tecnologias em saúde e redes sociais virtuais serem passíveis ao cuidado à saúde e muito utilizadas em tempos de COVID-19, revelam-se incapazes de substituir o contato presencial. **Conclusão:** as redes sociais virtuais e tecnologias fortalecidas, ao longo da pandemia, pela efetividade de sua utilização para garantia do distanciamento social, possibilitam atenção segura facilitando o cotidiano de trabalho dos profissionais, dos usuários e a organização das ações nos serviços de saúde.

Descritores: COVID-19; Tecnologia; Redes Sociais Online; Atenção Primária à Saúde; Atividades Cotidianas.

RESUMEN

Objetivo: comprender la tecnosocialidad en el cotidiano de los profesionales de la salud en la Atención Primaria de Salud y en las unidades de referencia en la pandemia de la COVID-19. **Método:** estudio integrado-cualitativo, por medio de casos múltiples, basado en la Sociología de la Vida Cotidiana, realizado junto a 47 profesionales de la salud. **Resultados:** con la pandemia, muchas acciones de salud fueron interrumpidas o readaptadas al formato 'remoto', mediante el uso de la tecnosocialidad para formar grupos con usuarios, reuniones con directivos, brindar formación profesional, buscar de información en salud y comunicarse con familiares y amigos. Si bien las tecnologías en la salud y las redes sociales virtuales son pasibles a la atención médica y ampliamente utilizadas en tiempos de COVID-19, se muestran incapaces de remplazar el contacto presencial. **Conclusión:** las redes sociales virtuales y tecnologías fortalecidas a lo largo la pandemia, por la efectividad de su utilización para garantizar el distanciamiento social, permiten una atención segura, facilitando el trabajo de los profesionales, los usuarios y la organización de las acciones en los servicios de salud.

Descriptores: COVID-19; Tecnología; Redes Sociales en Línea; Atención Primaria de Salud; Actividades Cotidianas.

INTRODUCTION

Techno-sociality can be defined as a mode of communication and social interaction with the use of technologies¹. One of the most striking characteristics of post-modernity is the technological advance that influences ways of life and the social imaginary, with society's re-enchantment with new technologies^{1,2}.

Digital tools for interaction with the other/social, i.e., techno-sociality, are increasingly present in people's daily lives and have been used both professionally and personally, promoting communication between people and the achievement of new information and knowledge³, specifically in times of the disease caused by the new coronavirus (Coronavirus Disease-19/COVID-19).

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COVID-19 configures a serious public health problem^{4,5}, a challenge for science and world society experiencing social distancing, which required agile responses and reorganization of health systems to face it⁵, such as the need to adapt and implement new strategies in health services⁶. This distancing brings the increasingly intense use of health technologies and virtual social networks to everyday life⁷, exposing health professionals to new ways of acting⁸. Although the use of health technologies and virtual social networks is an opportunity to continue the assistance to users⁹, it does not replace face-to-face contact¹⁰.

The relevance of this study is based on highlighting the advancement of technology and its use, as well as the changes imposed in the routine of health professionals in Primary Health Care (PHC) throughout the COVID-19 pandemic, since PHC is reference for the initial care of people with suspected or confirmed COVID-19¹¹.

In this study, techno-sociality is considered as the use of health technologies and virtual social networks during the COVID-19 pandemic for the development of actions in the routine of PHC professionals. Therefore, the question is: how does techno-sociality appear or is present in the routine of PHC professionals and reference units in the COVID-19 pandemic?

The objective was to understand techno-sociality in the routine of PHC health professionals and reference units in the COVID-19 pandemic.

METHOD

This is an integrated-qualitative study of multiple cases¹² based on the theoretical framework of Comprehensive Sociology of Everyday Life¹³, originating from a master's dissertation. The Comprehensive Sociology of Everyday Life aims to understand and interpret the individual and collective experiences of persons in the face of sensitive reason and the imaginary^{13,14}. Understanding does not seek to unravel the why, the cause and the how; it performs the description of facts and strives to contain in itself the meanings experienced regarding a given object studied¹⁵.

Three cases were chosen in this study, based on evidence of multiple cases integrated by following the logic of literal replication, i.e., similar results that need to be analyzed carefully¹². This study is integrated, as it includes three units of analysis: "the professional use of techno-sociality in the routine of PHC for health promotion actions", "the professional use of techno-sociality in the routine of a reference team for PHC and health promotion" and "techno-sociality in the routine of the professional/person and its purposes".

The study scenario consisted of three Brazilian municipalities, two in the state of Minas Gerais and one in Santa Catarina, Brazil. Volunteer participants were 39 PHC health professionals and eight key informants from PHC reference teams, including physicians, nurses, speech therapists, physical therapists, nutritionists, psychologists, dentists, oral health assistants, nursing technicians, community health agents (CHA) and administrative agent.

The invitation for voluntary participation was made by telephone, email, WhatsApp or, when possible, in person. A total of 151 professionals were invited, of which 47 participated in the study (24 refused, 77 did not respond after six attempts of contact by email, with a time interval of fifteen days, one was on vacation on the day of data collection at the health unit, one did not meet the inclusion criteria, one withdrew from participation after acceptance).

The sources of evidence of data collection were the open individual interview with a semi-structured script and records in field notes. The interview script contained questions related to the characteristics of research participants and nine questions related to techno-sociality in the routine of PHC professionals as a source of attention and care for users and their families. A pre-test of the script was done before data collection. Field notes characterize the operational purposes of the study development, describing the features of study scenarios, professionals and data collection. As an inclusion criterion, the professional should have been working in PHC for a minimum period of six months, excluding professionals on vacation or on leave from work during the data collection period.

In the first moment, data collection took place between April and May 2021 in a virtual environment via Google Meet platform. The second moment was between July and September 2021 in a mixed form (remotely via Google Meet concomitantly with an audio call via WhatsApp® or in person). In the third moment, it took place in October 2021 in person. Face-to-face interviews were carried out in a private room at the health unit, respecting preventive measures against COVID-19. The interview was audio-recorded or video-recorded, transcribed afterwards, and sent to participants by email for data validation, with an average duration of 21 minutes.

The analysis of interviews was based on Thematic Content Analysis, considering the semantics¹⁶ and the analytical technique of the cross synthesis of integrated-qualitative multiple cases¹², originating four thematic categories. The category addressed in this article is 'The pandemic changes the routine of health professionals: techno-sociality in use'.

The research protocol was developed according to Resolution 466/2012 and complementary resolutions¹⁷ of the National Health Council. Data collection took place after project approval by the Research Ethics Committee of the institution. Note that access to the research field occurred with authorization of the health secretaries. All participants completed the Informed Consent Form.

In order to guarantee the anonymity of participants, code names E1, E2, E3 were adopted... The protocol was conducted according to guidelines of the CONSolidated criteria for REporting Qualitative research (COREQ).

RESULTS

Of the 47 participants, 37 (78.7%) are female. As for marital status, 23 are married, 18 are single, three are divorced, two are cohabiting, one is in a common-law marriage. Among participants, 24 have a postgraduate degree, four have completed higher education, two have incomplete higher education, 16 have technical specialization and one has secondary education without technical training. Time in the profession varied between one and 37 years, median of 12 years, and mode of 10 years. Considering the use of virtual social networks, the time varied between 40 minutes and 20 hours, except for a participant who stated not using it on a daily basis, with a median of three hours.

The results consider the analysis subcategories, as shown in Figure 1.

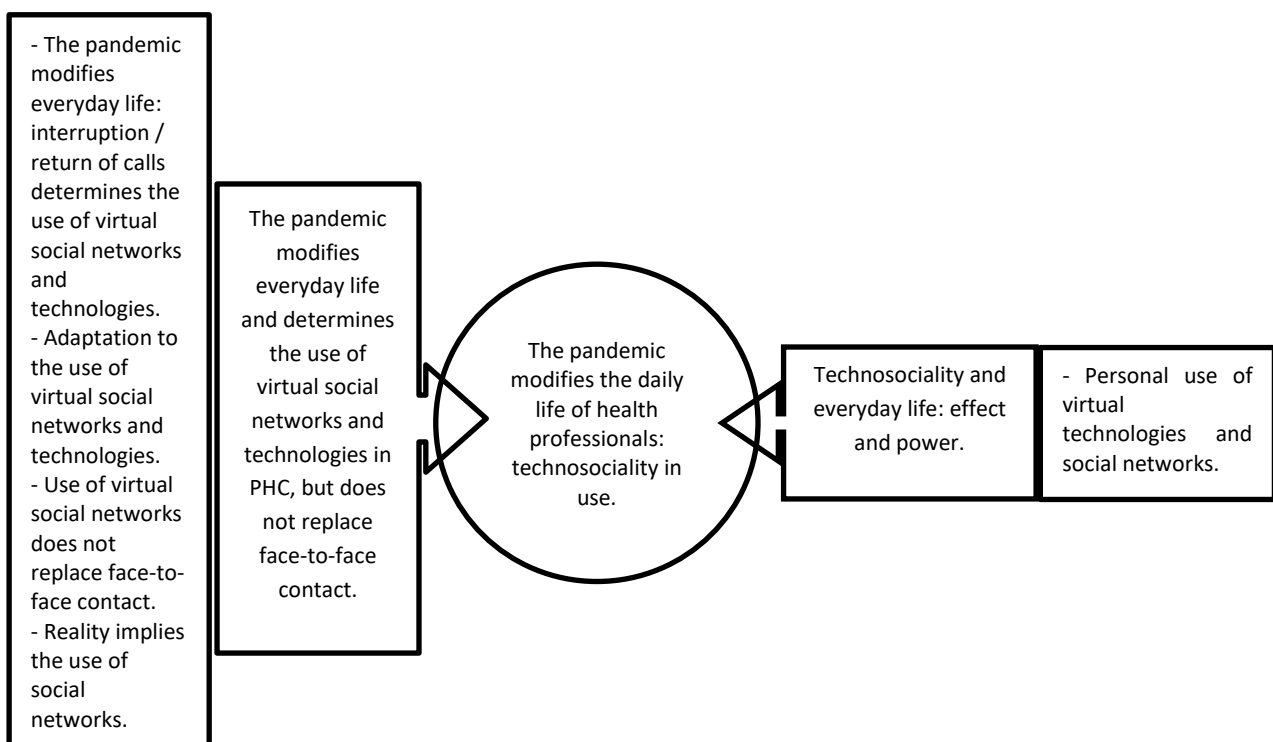


FIGURE 1 - Records units, subcategory and empirical category The pandemic modifies the daily lives of health professionals: technosociality in use. Minas Gerais/Santa Catarina, Brasil, 2021.

The pandemic changes the routine and determines the use of virtual social networks and technologies in Primary Health Care, but does not replace in-person contact

Health technologies and virtual social networks emerge as an alternative form of continuing health care individually and in groups, given the need to adopt social distancing during the COVID-19 pandemic (Field Notes).

A new routine emerges in the COVID-19 pandemic, changing health care demands and needs, restricting in-person care to urgent health conditions and symptomatic cases of COVID-19:

People who sometimes did not attend the Family Health Strategy are now attending more. Also because of what the country is going through, many people have lost their health insurance, have never used the unit, never received the health agent, now they need to receive them. Sometimes, they work outside home and don't have time to come to the unit, so they communicate with us through social media. (E20)

Tooth brushing was every Friday all day long, it reached seventy-five children at its peak, that's why we wanted to create a WhatsApp group, an online group, so we wouldn't lose these children, because there's a very high index of cavities here, the child gets here in a very critical state of oral health. The pandemic came, everyone at home tends to eat more. The person at home is lazier with care, it was good for us and for those who participated as well. (E32)

Everything was arranged to start a smoking group; the following week came the news of a pandemic in Divinópolis and that this type of meeting could no longer be held. (E45)

With the pandemic, training and meetings with management had to be readapted to a remote format:

Before the pandemic, we used to have in-person trainings, after the pandemic, training from the Health Department started via links. [...] meetings really, related to work and events in general. (E9)

The adaptation to use of health technologies and virtual social networks has existed since the beginning of the pandemic:

The Yoga Group was created in 2019. We had in-person activities until the beginning of March 2020. When the pandemic came, at first, we didn't know how it was going to be and how long it was going to last, but already in the month of April 2020, we adapted in order that meetings continued, precisely because we noticed the need to maintain this mental and emotional support in a period of isolation as intense as it was. We had the lockdown. Activities were abruptly interrupted. This really affected these older adults emotionally, and then, we saw an even greater need to do something that could fill this need for contact and the consultation. (E7)

There is reference to the initial difficulty in adapting to the use of health technologies in the routine of service even before the pandemic:

At first, I found it very difficult (the use of the Citizen's Electronic Record - PEC) because we didn't know where to put it, on paper it was very easy, you wrote "patient admitted". In nursing, it was like this: "age X, arrived walking or not, accompanied by so-and-so". So, I'm not sure if it's because this technology is very recent, or at least here that is a smaller town. (E17)

Although tools as virtual social networks and technologies used in health for telecare can be used in health care, they cannot replace face-to-face contact:

The awareness, I don't know if we would achieve it by means of this non face-to-face contact. Sometimes, it seems that if you talk personally to the person looking into their eyes, I guess you need both, you cannot completely abandon it?! Still, the impact is positive. (E1)

The matter of the effectiveness of these online consultations has to be very well evaluated by each professional responsible for that service, because a virtual consultation will not always meet the patient's needs as an in-person consultation, especially in terms of physical examination. [...] it does not replace an in-person consultation! (E15)

(Online tooth brushing) does not replace my clinical observation, contact is different, so much that they come here today for tooth brushing. This contact, the look, user embracement, are not replaced, but at that moment it was what we had. This made a difference for them, with the possibility of attending individually, we didn't see it as necessary because these boys are coming for tooth brushing, but it was a good experience. [...] it does not replace, but adds. I see it as a supplement! (E31)

The adoption of online service modalities was and is necessary. However, face-to-face contact cannot be completely replaced by the use of health technologies and virtual social networks (Field Notes).

The reality experienced in the routine of PHC services implies the use of virtual social networks for the development of health actions or the desire to implement strategies and actions with the use of technologies:

I have a very strong desire for a project involving the entire team and including, mobilizing the population on the issue of trash, you know? The issue of collection, storage, the harm to people's health caused by trash. [...] a large-scale project at the municipal level, you know? Involving the environment, health, everyone, intersectoral really. [...] wow, if there was a project to use this social network to mobilize the population! (E30)

Techno-sociality and everyday life: effect and power

The personal use of health technologies and virtual social networks by research participants is aimed at taking online courses, searching for health and care information, and communicating with friends and family:

Oh, I watch a lot of movies and documentaries on YouTube. Online lectures, I watch a lot! Therefore, preparatory for my group and for my personal development too. I take a lot of online course through other platforms, not YouTube or Facebook or Instagram, but I use them a lot! Today, for me, it's a means of professional qualification, and I quite like it! Because there are short courses and we do many things when we can, right? I make the most of my extra time! My free time, taking internet courses. [...] I take a lot of online courses! From handicraft courses, painting. Crafts in general! My postgraduate studies, I ended up finishing online, because the pandemic came and we had to adapt. (E7)

I use it particularly when I'm on the other side, wanting to make an appointment, I use WhatsApp. I check Instagram to look for professionals, references, information to find out where they work, titles, specialties. (E23)

Here at the unit, I don't even use it that much, only at lunchtime, after the end of working hours, I check Instagram, Facebook, more for leisure in a moment of distraction and WhatsApp chat, family group, friends. (E44)

DISCUSSION

The pandemic has reshaped the organization and functioning of PHC^{11,18}: in-person care at the units prioritized assistance to cases of flu-like illness¹⁸, suspending and postponing care for chronic conditions, making it difficult for users to access health care^{19,20}. The activities of operative groups and home visits were cancelled. This way, the pandemic made professionals reinvent new ways of approaching users and families¹⁰, seeking to meet the health needs of the community⁹.

Given the need for social distancing to reduce the risk and avoid contamination by the SARS-CoV-2 virus, and to maintain the continuity of care provided by PHC professionals, health technologies and virtual social networks were rapidly implemented^{21,22}. Techno-sociality contributed to health care in the routine of PHC by representing "an effective and safe option to facilitate contact between health professionals and patients" in pandemic times^{6,2}. Health technologies expand users' access to PHC in the pandemic context¹¹.

The emergence of a new world on the internet influences the daily life and social imaginary of postmodern society and virtual exchanges promote the establishment of social bonds^{1,23}.

The use of social networks such as WhatsApp for teleconsultation guarantees the safe and continuous offer of actions, avoiding the worsening of users' clinical condition. It ensures the resolution of routine demands of users, such as prescription renewal⁵.

The creation of WhatsApp groups with users by the Family Health Strategy team/professionals represents a way of continuing health care in pandemic times, clarifying doubts, providing guidance and health education on health care and promoting therapeutic groups. Likewise, guidance on tooth brushing via WhatsApp and the Yoga Group via Google Meet during the pandemic period. This prevented users from being completely unassisted given the temporary suspension of guidance and operative groups, routine in-person consultations, thereby reducing the risk of contamination by SARS-CoV-2²⁴.

As a security measure, meetings and training were performed online during the pandemic. The PHC Guidance for Confronting the COVID-19 Pandemic recommends the performance of collective activities such as team meetings with patients and between professionals preferably online²⁵.

According to participants of this study, the difficulty with initial adaptation to the use of health technology existed even before the COVID-19 pandemic. Although the implementation of techno-sociality in everyday life by means of technological tools constitutes an innovation in health practices, it has brought several challenges to professionals, as it requires adaptation and acquisition of new knowledge²⁶.

A striking feature of postmodernity is the emergence of new ways of interacting and creating social bonds using the internet and its resources to share ideas and feelings, emotions, passions and fantasies²⁷. Progressively, the diffusion of the internet and its resources tends to disappear with the interface that separates the real world from the virtual world². The internet represents an essential vector of postmodern society, a new way of being-together^{1,28}. However, the use of health technologies and virtual social networks in the routine work of PHC professionals to monitor users and families is challenging, as these virtual tools demonstrate they do not replace physical and face-to-face contact^{29,30}.

The COVID-19 pandemic has awakened dormant pre-modern base feelings and values. With social networks, the values of modernity do not materialize and we see the emergence of pre-modern basic values of exchange and sharing³¹, such as generosity and solidarity³².

Health technologies have the potential to impact in more resolution, health care coverage, accessibility, completeness and provision of quality monitoring for patients with chronic diseases, indicating they will be increasingly used, even after the pandemic³³. Digital tools collaborate to establish a new online model of care²², consisting of a means of communication and social interaction³⁴.

In postmodern society, techno-sociality is an important element of life in society¹ and contemporary phenomena bring another conception of social connections²⁸. This new online modality of health care in the pandemic represents the construction of other possibilities to face social distancing, reducing the need for in-person visits of users to the unit³⁵. According to participants of this study, the routine of PHC implies the use of virtual social networks to promote health actions. There is a worldwide increase in the use of techno-sociality to configure educational actions and support the health care of the population and communities³⁶.

According to study participants, the search for knowledge and professional qualification was favored by online courses. With the pandemic, classes had to be readapted to the remote format and video classes³⁷. Google Meet was the most used tool for synchronous meetings, and applications such as Kahoot aim to provide interaction with students during class³⁸. Online education has become the main learning method during the pandemic, as it favors access and prevents the occurrence of SARS-CoV-2 infection³⁹. In addition, the use of WhatsApp, YouTube and e-mail facilitates access to news, research and communication with friends and family⁴⁰.

Techno-sociality is present in the professional routine and daily life of study participants, which can be replicated for similar realities. A limitation of this study is the fact of not specifying the health reach of each social network and technology used in different realities of the multiple cases included in this study, since the objective was to understand the use of techno-sociality in the routine of PHC professionals and in reference units, and this was achieved in the results presented.

The findings of this study contribute to the advancement of knowledge in the areas of health and nursing by identifying innovation in health practices through the use of techno-sociality for promoting actions of care, education and health promotion, telemonitoring and teleservice, indicating that health technologies and virtual social networks are part of the routine of health professionals working in PHC and reference units, and they have advanced.

CONCLUSION

This study points out that the pandemic caused sudden changes in the routine of health professionals working in PHC. Many health actions and in-person care had to be interrupted, while others were readapted to remote format: educational or follow-up groups, such as yoga, meetings and professional training.

In contrast, despite the potential of health technologies and virtual social networks to promote care actions, teleservice and telemonitoring, they are still unable to fully replace face-to-face contact between professionals and users.

In everyday life, the use of virtual social networks and technologies goes beyond professional use and expands to personal use, qualification in online courses and communication with family and friends. Techno-sociality is strengthened by the effectiveness of its use in health services in the COVID-19 pandemic enables many actions and facilitates people's lives, the work of professionals and the organization of actions provided safely in pandemic times.

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