Socio-Digital Challenges for Social Work in the Metaverse

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Abstract

The metaverse will have a direct impact on the way we relate to each other as. The in-terest of the young population explains the extent to which this new developing tech-nological paradigm is already present in our society, generating environments where people will feel part of them and where interactions will be more authentic, immer-sive, and it remains to be seen whether these relationships will also be more inclusive. The article identifies these challenges through a literature review, making a categori-cal comparison with the professional competences of social work drawn from the pro-fessional codes of standards and competences. A qualitative analysis has been carried out to identify those competences that may be affected by one or more social chal-lenges arising from the popularisation of the metaverse. It presents important chal-lenges for social work, such as changes in community, governance and individual behaviour, as well as implications for ethics, privacy and the way we understand social intervention that require an epistemological, methodological and practical debate in the profession, as yet unpublished, to adapt to this new socio-virtual dimension in which millions of people have already settled. Finally, v-social work is proposed as a new professional field with specific competences.

Keywords: v-social work, metaverse, social work competencies, e-social work, social challenges

Introduction

Evolution of the metaverse

In the last years, we have witnessed an explosion of the term 'metaverse', a term that, despite launching us into a vision of the future, has a long taxonomic history. Neal Stephenson was the pioneer in coining the term in his work Snow Crash, in which he explained it as the space in which the events of the real world and those of a virtual world overlapped, where interaction between individuals was possible through avatars that were inserted in a three-dimensional environment, generating value through the performance of different social activities (Ayiter, 2008; Papagiannidis *et al.*, 2008; Park and Kim, 2022).

Since then, the first scientific studies on the metaverse have taken up Stephenson's idea and began to elucidate how the metaverse could be constructed (Budiansky, 1995) and how it would be designed based on the incipient environment design and 3D modelling (Coupland, 1996; Kobryn, 2000) or how the avatars he advocated could be realised on the basis of virtual human real-time research (Allbeck and Badler, 1998; Kobryn, 2000).

Second Life, developed in 2003, had a special relevance in the scientific literature, and it meant a revulsive because users are responsible for their own 'life', managing to generate virtual communities, create objects, exchange virtual products and even work and obtain money through a local currency (Peña, 2022, p. 32). Thus, based on this video game, Cacciaguerra (2006) analyses how infrastructures, until then unreliable, will allow players to participate in virtual environments through mobile devices. Bardzell & Shankar (2007) understand that these platforms are no longer just games but are 'metaverses' that go beyond gaming, blurring the barrier between play and work. Ludlow & Wallace (2009) already spoke of the social risks to which society was exposed by the development of parallel worlds outside the rules of control.

The baton for these advances was taken up by Fornite platform, which currently has more than 300 million users and has managed to attract major brands. These brands have developed virtual goods for sale in the video game and have developed large-scale events. Undoubtedly, this commercial capacity to attract millions of users, coupled with the take-off in recent years of digital technologies, and the global confinement caused by coronavirus disease 2019 that vectored the acceleration in the development of virtual worlds (Navarro, 2021), have contributed to a new generation of much more immersive metaverses where the virtual world has gone from being confined to a screen or mobile device to

being superimposed on the real world, supported by technologies such as Virtual Reality or Augmented Reality.

According to Park and Kim (2022), the new metaverses differ from previous metaverses in three fundamental aspects: (1) technological improvements that allow for more immersive developments with faster processing that improve the precision of vision, language recognition and, in short, improve the user experience; (2) advances in mobile devices and wearables that allow us to stay connected to the metaverse at all times; and (3) the link between the real world and virtual currency, cryptocurrencies have made it possible to generate a bridge between virtual activity and real life.

This new generation of metaverses such as Roblox, The Sandbox, Decentraland, Horizon Worlds, or Zepeto, among others, is spreading in recent years at breakneck speed based on the social values of Generation Z. Roblox, for example, has close to 200 million monthly active users (Park and Kim, 2022, p. 4209; Peña, 2022, p. 178) of which one third are under sixteen years old and in a country like the USA 65 per cent of children between nine and twelve years old confirm that they are active users of Roblox (Park and Kim, 2022).

Millions of individuals, mainly from generation Z and generation Alpha are treating virtual worlds as spaces where they can socialise, create, build and even create businesses (Peña, 2022), evidencing a paradigm in which technology goes from being an external medium to being incorporated into people's functions, generating a mixed world, virtual and real, which remains connected at all times and in which people participate continuously without distinguishing barriers between the virtual and the real (Dwivedi *et al.*, 2022).

Characteristics of the metaverse

Diego Hidalgo (2021, p. 31) illustrates this paradigm shift in the use of technology by reflecting on the three ages of digital technology:

The era of solid digital technology (1960/1980–2007)

The most common devices, such as the personal computer, were located in precise places, framing their use physically and temporally so that it was almost incompatible with other activities. As soon as you stopped using the technology, you were physically separated from it.

The age of liquid technology (2007–2020)

Although smartphones had appeared a few years earlier, especially the BlackBerry, which was primarily for professional use, and although it

took a few years for smartphone penetration in society to become mainstream, the appearance of the first iPhone marked the inflection point between solid and liquid technology. Since then, our digital consumption has lost the original physical barriers and we use digital technology in parallel to other activities. In this line of thought, Ferguson (2008) already speaks of liquid social work with the emergence of the smartphone.

The beginning of the gaseous technological era (2020–)

Around 2020, the process of vaporisation of technology begins, based on the miniaturisation of connected devices, on their hardly detectable penetration—which allows a space to be connected without us knowing it—and on the multiplication of the speed of connection. This would include augmented reality devices with peripherals in our ears and on our bodies (in 2021, more smart speakers were sold than tablets). With the advent of 5G, it allows devices to connect to each other and contributes to the rise of smart cities or home automation environments.

The new metaverse is built under this vision of the gaseous technological era, they will be environments where people will feel that they really exist within it, and where they will work, have fun, interact with virtual friends and have virtual professional and personal relationships. It remains to be seen whether these relationships will also be more inclusive.

The metaverse is called to be a space of expanded sociability, on which a joint reflection on this virtual space should be deepened, as it is a product designed mainly by private companies, which conditions the neutrality of the technology, being susceptible to spurious interests, in addition to the risk of generating biases or digital divides in access and use (López-Pelaez, 2014).

Social work in the metaverse

The metaverse is, in fact, a new field of action for the social work profession. New social relations have been forged in the metaverse, bringing organisations that take advantage of the potential of relocation and dislocation offered by the metaverse to offer their products and services.

As we have seen in the figure above, the popularisation of the metaverse will constitute significant changes in the conception of the community and the individual, as well as important implications in the fields of ethics, childhood, social integration, employment and social participation.

All of this challenges the social work profession to review its epistemological and methodological models and, why not, also to generate new theoretical parameters to support social intervention in the virtual dimension.

A step beyond digital social work: v-social work

There is a temptation to include in the definition of "digital social work or e-social work" all the technological advances in which social work may be involved. Thus, in the definition provided by López-Pelaez (2018) on e-social work, it is identified as the field of social work that uses ICTs where individuals, communities and groups have needs that can be met through technology and it is possible to develop intervention programs, research and design public policies to address them.

Undoubtedly, *v-social work* shares many of the novelties that *digital social work* incorporates with respect to the traditional conception of social intervention.

However, we consider that this is a new field within social work, as technology is not used as a means for social intervention, as is the case with *e-social work*, but rather the intervention is developed entirely in the technological and virtual environment.

The following graph illustrates this paradigm conception in relation to the presence of technology in the development of social intervention, in which three fields of intervention are differentiated. First, traditional social work that maintains a direct relationship with the individual, group or community without the need to implement technological instruments or devices. Secondly, there is *digital social work, or e-social work*, where technology is used as an intermediary in the professional-client relationship and, finally, *virtual social work, or v-social work*, where the relationship is established directly, as in the case of traditional social work, but immersed in a virtual reality (Figure 1).

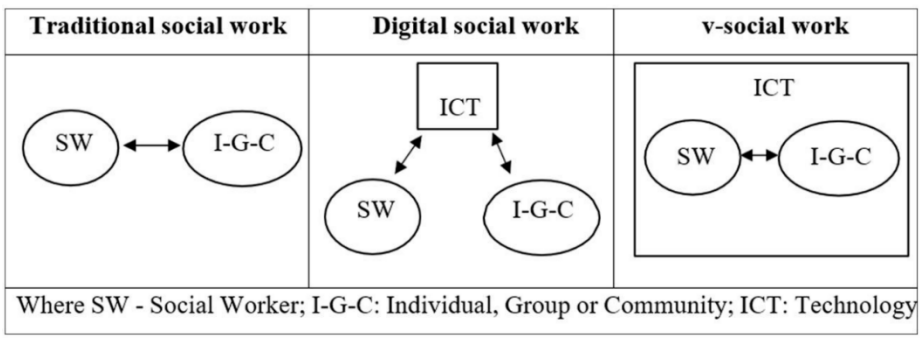

Figure 1: Differences in interaction in social work.
Source: Authors.

V-social work or virtual social work can be defined as a field of social work in which the subject and the object of social intervention are located in the virtual world and which deals with the social, community and individual processes that arise from the interactions that take place in this virtual world.

In the following, we develop some examples that may help to clarify the professional practices of virtual social work:

- Intervention on bullying in schools in the metaverse: In the metaverse, there will be schools whose students, due to the possibilities of delocalisation offered by the virtual environment, will come from different parts of the world. If the students come from different backgrounds, and the entire interaction takes place in the virtual space, it seems logical that the social intervention takes place in the same environment in which the interaction takes place.
- Creation and management of social services in the metaverse: The metaverse is a space in which millions of people share their lives, represented by their avatars, who enter for work, leisure, commercial reasons, etc. It seems foreseeable that the different situations of social exclusion in real life will also be reflected in the metaverse, so the presence of social work in the metaverse will be aimed at making situations of social exclusion visible, representing and defending the rights of socially vulnerable groups, fighting to create virtual social services or at least generating virtual social services offices in the metaverse.
- Virtual counselling and guidance: The virtualisation of society will generate additional exclusion through access to technology, where inequality in the availability of devices and means of connection to the metaverse will require social support programs, as well as through training, where large parts of the population will not have sufficient tools, skills and training to access and participate in the opportunities offered by the virtual platform. The creation of virtual social services centres in which social work professionals can work to avoid the digital divide, promote employment guidance in the metaverse or help in the processing of benefits and resources of the metaverse.

Clearly, v-social work does not replace or exclude traditional social work or e-social work, but is complementary to them and constitutes a new field of professional practice and they represent a process of response from the profession to the intervention with and from technology as a shaping element of society, as well as a field of intervention in which to develop and put into practice the digital rights of citizens.

The dimension offered by v-social work is still an unexplored field for the profession, and given the enormous amount of the population that already regularly accesses the different metaverses created by companies and virtual environments in which social interactions are developed by all, together with the future projection of these virtual environments.

Methodology

The methodological process followed to identify the challenges of the metaverse for application and practice in social work consists of the following steps.

First, an analysis of the state of the art of the metaverse has been carried out by means of a bibliographic review of the main academic databases such as Web Of Science, Scopus and DOAJ and of the grey literature specialising in new technologies. This has allowed us to configure the theoretical framework that supports the results obtained in this article.

Next, the scientific and media impact and scope of the metaverse was analysed. To this end, the scientific impact has been measured by analysing the historical evolution of scientific publications related to the metaverse, as well as the annual evolution of citations of these publications in the Web of Science.

The next stage was aimed at identifying the social challenges generated by the popularisation and use of the metaverse. This identification was based on a systematic literature review in the Web Of Science (WOS). The review consisted of the conjunction of the search terms 'metavers™' and 'challenge™' joined by the Boolean operator 'AND', the search generated a result of 103 publications. A further filter was applied to this base of publications through a detailed reading of these 103 publications, selecting only those analysing challenges generated by the metaverse related to the social sciences, which generated a base of twenty-nine publications. The detailed reading of this literature has resulted in the identification of seventy-four social challenges arising from the metaverse.

A process of synthesising and categorising the information was then carried out, through which challenges identified with a high level of semantic similarity were joined together, obtaining an index of fifty-one synthetic challenges and categorising them into twelve categories that form the basis for the work.

Subsequently, an analysis of the main indexes and codes of professional competencies in social work worldwide has been carried out, including

1. Code of Ethics of the National Association of Social Workers (NASW, 2021) and the Practice Standard Guidelines.
2. The official documentation of the Canadian Association of Social Workers regulation (The Canadian Council of Social Work Regulators, 2012).and the 'Scope of Practice Statement' (CASW Federation, 2020), which specific roles associated with the functions outlined above.
3. Specifically, the professional standards of professional practice in Quebec (Ordre des travailleurs sociaux et des therapeutes conjugaux et familiaux du Quebec, 2019) have been reviewed.
4. In Australia, the Code of Ethics (Australian Association of Social Workers, 2020), and the 'AASW Practice Standards' (Australian Association of Social Workers, 2023).
5. The British Association of Social Workers (BASW, The Policy, Ethics and Human Rights Committee, 2021) lists professional roles in the UK Code of Ethics and in the UK Social Work profession standards document (Social Work England, 2019) which lists six general core competencies,
6. Spain: The Spanish Code Of Ethics for Social Work (Consejo General del Trabajo Social, 2019) edited by the Spanish General Council of Social Work, and the White Paper on the Degree in Social Work (ANECA, 2004), which incorporated a total of four new competences that were not in the original English.

In order to synthesise all the information on professional competences collected, a summary table has been drawn up in which the competences with a high semantic similarity have been joined together, resulting in a total of ten general professional competences and thirty-eight specific competences.

Finally, based on the battery of social challenges identified and the table of professional competences, a qualitative analysis has been carried out to identify those competences that may be affected by one or more social challenges arising from the use and popularisation of the metaverse.

Findings

We are witnessing a race for the metaverse in which the most important technology and video game companies are fighting to position themselves in the creation of this new virtual world that will definitively change the way in which we connect to the internet and use technology.

Although the scientific literature on the metaverse is recent, there are already several authors who warn of the potential challenges posed by the metaverse and which, as far as the social sciences in general and

social work in particular are concerned, should make us review the frameworks of operation and intervention in order to anticipate and prevent new forms of exclusion or discomfort that may be generated in the virtual world in order, on the one hand, to collaborate in the planning of the metaverse and, on the other hand, to develop competencies that enable professionals and social care services to intervene in these new virtual realities. Table 1 shows the social challenges identified in the literature review, grouped into categories that define the areas of action that need to be worked on in order to adapt the social sciences to the virtual reality of the metaverse.

However, as has happened with the Internet and mobile networks, which have practically taken over all spheres of people's and communities' private and public lives, we are facing a virtual world with a strong global vocation that threatens to be present in our daily lives as a society and in all areas in which we interact as a group or individually, Therefore, not everything should be entrusted to disconnection or intervention for non-abusive use, since it will be present in our daily lives, but rather to intervene from the medium itself, from virtual reality itself, so that its use contributes to personal and social well-being. Therefore, it is essential to review the professional competences in order to assess whether or not they are valid in a future virtual world in the metaverse.

Professional competences in v-social work

Based on a comparative analysis of the social challenges identified and the professional competences, we can see that *v-social work*, that is, social work that operates in the virtual reality generated in the metaverse, must redefine some of the competences in order to meet the new social realities and social vulnerability that may arise in the metaverse. This is discussed in more detail below.

One of the elements to be taken into account that makes a substantial difference between the real world and the virtual world is the ownership of institutions. While in the real world legislation and rules are governed by public institutions, in the metaverse, if we look at the most advanced developments in the metaverse, they are currently led by private institutions. This, according to Papagiannidis *et al.* (2008), can generate important ethical conflicts, even more so if we focus on the field of public social services in the metaverse, which would operate in a private environment where data privacy policies would have to be carefully investigated.

Another fundamental difference that needs attention in shaping social intervention is the ubiquity and deterritoriality offered by the metaverse as opposed to the real world where geospatial boundaries and borders are the basis for identifying the jurisdiction of each territory.

Table 1. Social challenges.

Categories	Social challenges	References
Changes in the community	Change in community behaviour	Hendaoui *et al.* (2008)
	Generation of a virtual avatar community	Hendaoui *et al.* (2008)
	Reduced competition through unlimited resources	Park and Kim (2022); Dwivedi *et al.* (2022)
	New forms of social communication	(Kye et al., 2021)
Governance/legal	Potential for improving government efficiency	Hendaoui *et al.* (2008)
	Changes in legislation for implementation in the metaverse	Hendaoui *et al.* (2008)
	Conflict between administrations and services over the use of technology	Marzaleh *et al.* (2022)
	Difficulty in controlling content (risk for minors)	Park and Kim (2022)
	Requires building a set of norms and values for interacting in the metaverse.	Ortega-Rodriguez (2022); Papagiannidis *et al.* (2008)
	Generate new governance mechanisms to avoid income inequality and inequality in access to the metaverse and fight against crime.	Loveys *et al.* (2022); Yang *et al.* (2022); Papagiannidis *et al.* (2008); Dwivedi *et al.* (2022)
	Conflict global regulation and ubiquity in the metaverse (led by tech companies) with the legislation and regulation of individual states	Papagiannidis *et al.* (2008); Dwivedi *et al.* (2022); Corballis and Soar (2022)
	Legislative developments on privacy and cybersecurity are lagging behind innovations in the metaverse.	Dwivedi *et al.* (2022)
	Increasing dependence of states on the media control of big tech companies	Guitton (2022)
	Potential for aggravation of online crimes due to the immersiveness of the metaverse	Marzaleh *et al.* (2022)
	The metaverse can be used for the improvement of (urban) planning	Hudson-Smith and Batty (2022)
Changes in the individual	Complexity in individual intervention with avatars (e.g. how to interpret their responses, who is responsible for the avatar's actions?)	Hendaoui *et al.* (2008); Dwivedi *et al.* (2022)
	More realistic and efficient one-to-one online interactions with a more realistic presence experience that facilitates professional practice and treatments.	Marzaleh *et al.* (2022); Riva *et al.* (2022)
	Generation of appropriate AI-based responses	Zyda (2022)
	Splitting of the individual figure (real and virtual) and conditioning of the real in the virtual and vice versa	Hudson-Smith and Batty (2022); Hendaoui *et al.* (2008)
	Potential development of negative individual behaviours such as addiction or social isolation	Hendaoui *et al.* (2008)
	Potential to seek compensation in the virtual world for what is not available in the real world	Park and Kim (2022)

(continued)

Table 1. (continued)

Categories	Social challenges	References
Privacy—data protection	Loss of user privacy	Marzaleh *et al.* (2022); Park and Kim (2022); Yang *et al.* (2022); Papagiannidis *et al.* (2008); Dwivedi *et al.* (2022)
	Increased vulnerability to viral virtual marketing	Hendaoui *et al.* (2008)
	Increased ease of identity theft	Hendaoui *et al.* (2008); Yang *et al.* (2022)
	More severe negative consequences due to immersive multi-sensory devices (amplified technical impact)	Dwivedi *et al.* (2022)
Economic inequality	Difficulty in accessing and using immersive devices due to the high cost of the technology	Marzaleh *et al.* (2022); Usmani *et al.* (2022)
	Deepening the digital divide between developed and developing countries	Marzaleh *et al.* (2022)
Mental health	Potential threat to human health (increased rates of depression, violence, self-harm, etc.)	Marzaleh *et al.* (2022); Han and Oh (2021)
	In excessive use, virtual harm can translate into real-life harm	Park and Kim (2022)
	Efficacy for the treatment of mental disorders and simulation through avatars and VR	Lee *et al.* (2022); Usmani *et al.* (2022)
	Potential for virtual clinics without geographic or time constraints	Usmani *et al.* (2022)
	Continued exposure to virtual profiles can lead to a habit of comparison with others, which is a threat to mental equilibrium.	Usmani *et al.* (2022)
	Mental health consequences of increased FOMO (fear of missing out) in the metaverse	Usmani *et al.* (2022)
	Increased social isolation and mood consequences	Usmani *et al.* (2022)
	The possibility of embodying a body that can be modified at will can exacerbate issues related to body misperception, body dissatisfaction and related behaviours.	Riva *et al.* (2022)
	Risk of living in the metaverse as a refuge from real life or as a place of comfort to retreat to, thus increasing the phenomenon of social withdrawal.	Riva *et al.* (2022)
	Potential for the creation of more friendly and accessible metaverses for older people or people with disabilities	Han and Oh (2021)
	Overexposure in a virtual world can lead to a lack of interest in the real world because of its incongruence with the virtual world.	Dwivedi *et al.* (2022)

(continued)

Table 1. (continued)

Categories	Social challenges	References
Children	Difficulty in controlling content and access by minors	Park and Kim (2022)
	Addictive use of the metaverse can lead to minor loneliness, depression, anxiety, social fears and academic underachievement.	Usmani *et al.* (2022)
	Children have a tendency to explore the virtual world in search of external validation, which makes it easier for sexual predators to take advantage of this.	Usmani *et al.* (2022)
Participation–social influence–dependence	In order to maintain a social ecosystem, it is important to participate in the metaverse, so services will be offered to encourage participation, which generates more social influence.	Park and Kim (2022)
	Increased vulnerability in a virtual world created by commercially driven companies with more immersive devices that create greater susceptibility to manipulation.	Papagiannidis *et al.* (2008); Dwivedi *et al.* (2022)
	Easier for companies to collect personal data from metaverse users	Dwivedi *et al.* (2022)
	Experience in the metaverse increases purchase intent	Lee and Kim (2022)
	The metaverse is a breeding ground for speculative attempts to extract value where there was none before.	Corballis and Soar (2022)
	Technological novelty predisposes us to accept it without making the right judgement, which makes us more vulnerable.	Murray (2020)
Social integration	Disability, gender, skin colour, nationality, cultural and linguistic background would be less evident in the metaverse, so people can live a virtual life with less risk of discrimination in the metaverse.	Park and Kim (2022); Smith (2022) Dwivedi *et al.* (2022)
Employment	Metaverse may lead to higher unemployment	Lee *et al.* (2022)
Ethics	The nature of marketed products and services may lead to deviations from real-world ethical standards.	Papagiannidis *et al.* (2008)
	Need to develop a corporate ethical responsibility framework and a code of ethics tailored to the virtual reality of the Metaverse.	Papagiannidis *et al.* (2008); Smithson (2022)
Training	Lack of training of professionals (Ortega-Rodriguez refers to education professionals but it can be extrapolated to ST professionals) and lack of coordination with metaverse developers.	Ortega-Rodriguez (2022)
	Not enough qualified people to deal with the complexity of the architecture and develop secure solutions for the metaverse.	Dwivedi *et al.* (2022)

Source: Authors.

In the metaverse, the network of resources, while they may be virtually proximate, may be located in the real world in remote locations serving different legislation, as well as different methodologies and priorities.

Undoubtedly, culture and language will be other disruptive elements in virtual societies, as people and groups with very different ways of conceiving relationships and with super-diverse codes will coexist in the same virtual spaces, and social work must develop or strengthen competences in order to adapt to this new reality.

There will most likely be a different taxonomy of diversity whose criteria will be based on economics, followers (centrality), profiles, etc. It will therefore be necessary to be alert to new vulnerabilities and new groups at risk of social exclusion.

If we focus on the professional competences that may be altered in *v-social work*, we must refer to the competences that refer to the ability to work and assess together with individuals, families, groups, organisations and communities their needs and circumstances. The specific competences that derive from it as follows:

1. Preparing contact and participation (UK)
2. Implement the means to establish a relationship of trust and collaboration with the persons concerned. Agree on a follow-up (Respect phases of the intervention process) (Quebec).
3. Establish a relationship of trust with the client, respecting an appropriate professional distance (Professional Relations) (Quebec).
4. Analyse and explain the interrelationship between personal and environmental factors (social functioning assessment).

They may have a very different meaning in the virtual environment. Dealing with trusting relationships and collaboration of the persons concerned is likely to have a different meaning in the virtual world and the real world and requires a redefinition of competence as the social relationships in the metaverse that v-social work would work on are not the same as those that traditional social work would work on, as well as the process of identifying the person's environment and supports.

The competence relating to the ability to plan, implement, review and evaluate Social Work practice with individuals, families, groups, organisations, communities and other professionals is also affected in its application in a virtual world such as the metaverse. Thus, within the framework of this general competence, some specific competences are stipulated that require in-depth revision

1. *Encourage collaboration and client engagement* (Quebec). In the Metaverse, social workers can use virtual platforms and tools to engage with clients and collaborate with other professionals. They

can use features to communicate and work together with clients and other stakeholders.

2. *Avoiding inappropriate relationships* (Québec). Social workers should be aware of the potential for blurred boundaries and take steps to ensure that they maintain professional relationships with their clients.
3. *Explain the intervention plan to stakeholders involved in the implementation of the intervention* (Canada). Social workers can use virtual tools to present and explain intervention plans to stakeholders, such as clients, families, and other professionals.
4. *Set realistic objectives in relation to the context and environment, the client's needs and the client's needs. Discuss possible options (Intervention planning)* (Québec). Social workers can use virtual brainstorming tools and other collaborative tools to explore different options and solutions with clients and other stakeholders, like whiteboards, mind maps and other tools to visualise and organise ideas.
5. *Support the development of networks to address needs and work towards planned outcomes by exploring with people the support networks they can access and develop* (Spain and UK). In the metaverse, social workers can use virtual networking tools to help clients develop and access support networks.
6. *To promote the growth, development and independence of individuals by identifying opportunities to form and create groups, using programming and group dynamics for individual growth and the strengthening of interpersonal relationship skills* (Spain). Social workers can use virtual group programming and dynamics to promote individual growth and development.
7. *Working with groups to promote individual growth, development and independence*. (UK)
8. *Using mediation as an intervention strategy aimed at alternative dispute resolution (Spain*). Social workers can use virtual mediation tools and techniques to resolve conflicts and disputes.
9. Advocate for individuals, families, groups, organisations and communities and act on their behalf if the situation requires it (Spain).
10. *Advocate with and on behalf of individuals, families, carers, groups and communities* (UK).
11. *Ensure that records are maintained in accordance with regulations and standards* (Quebec). In the context of the metaverse, social workers must adapt their competencies related to record-keeping and information sharing. It requires social workers to have knowledge of relevant regulations, policies and ethical principles that apply to recording and sharing information in the virtual environment.

12. *Implement legal and policy frameworks for access to records and reports. Share records with individuals, families, carers, groups and Communities* (UK). Implementing legal and policy frameworks for access to records and reports is also crucial for social workers in the metaverse.
13. *Keep and maintain information in accordance with ethical principles and relevant legislation. (Recording and sharing of information)* (Australia). Social workers must understand the ethical implications of recording and sharing information in the virtual environment and ensure that they are following established guidelines for confidentiality, informed consent, and data protection.
14. *Work effectively within interdisciplinary and 'multi-organisational' systems, networks and teams to collaborate in setting goals, objectives and timelines, and to constructively address disagreements* (Spain). Social workers must be able to collaborate with colleagues from different disciplines and organisations to develop and implement interventions that address the needs of clients and communities.

Limitations of research

This research has several limitations that should be considered. First, the metaverse is a virtual reality that is still under construction, and depending on the final characteristics it adopts, a more in-depth and refined competency analysis will need to be conducted to address the challenges, risks, and opportunities that arise from it. Secondly, due to the diversity of professional and competency documents on social work in each country, and the absence of internationally consensus texts, it is unfeasible to analyse all countries that have documents on professional competencies, so it is possible that some competencies related to digital social work that may be included in the reference texts of some countries are not covered in this study. Finally, as mentioned earlier, the bibliography on digital social work or social work and technology on which the identification and analysis of social challenges in the metaverse reality is based has been collected from the Web of Science, as it is the main scientific and academic database. Further research could involve analysing other scientific and professional databases as well.

Conclusions

The creation of the metaverse presents several challenges that society must confront. The unlimited resources available in this virtual world will reduce competition and open new opportunities for social

communication. This will result in a new way of socialising and building relationships, which will require a shift in mindset and a willingness to adapt to the new norms of behaviour.

This new reality poses potential negative individual behaviours that society must address. Addiction and social isolation are some of the issues that could arise from an individual's excessive involvement in the virtual world. The splitting of an individual's figure between reality and the virtual world may lead to the conditioning of the real in the virtual and vice versa. These behaviours may have severe mental health consequences and affect an individual's well-being. Studies suggest that individuals who spend excessive amounts of time in virtual environments may experience increased rates of depression, violence, self-harm, addiction, social isolation and fear of missing out (FOMO). The development of coping mechanisms is necessary to avoid these negative behaviours.

For the latter, the safety of minors will also be of concern, especially given the penetration of the metaverse into underage populations. Effective measures must be put in place to protect children from potential sexual assault, to ensure mental health care and to ensure that children's well-being is a priority in this new virtual space.

As the metaverse continues to evolve and become more ingrained in everyday life, professionals and social care services need to develop a deeper understanding of the unique challenges and opportunities presented by the metaverse and learning how to provide support and guidance to individuals navigating this space. In addition, it is important to make the metaverse more accessible to individuals with disabilities or those who may face barriers to participation, such as older adults.

This set of changes, that can lead to a shift of societal paradigm, creates a need for social sciences to review and adjust their frameworks for operation and intervention to anticipate and prevent any new forms of exclusion or discomfort that may arise in the virtual world. Thus, according to Davies (2019), communication technologies have consequences on the processes of socialisation, because, although they favour the integration of different spaces for socialisation, which are hardly viable outside a virtual environment, causing new opportunities and possibilities, they also constrain or mould us to processes that generate difficulties of integration or assimilation of the socio-cultural diversity that this expanded reality allows, leading to an increase in conflicts or social polarisation, as has already been observed in social networks.

In the case of Social Work, there is not enough literature corpus to discuss these adaptations. However, from the cross-countries competencies analysis, we can conclude that:

- Professional competencies in social work vary among countries but have common elements. A comparative analysis of social challenges and professional competencies shows that v-social work,

operating in the metaverse, must redefine some competencies to address new social realities and vulnerability.

- The ownership of institutions is a fundamental difference between the real world and the virtual world. In the metaverse, public social services would operate in a private environment where data privacy policies would need to be carefully investigated, generating ethical conflicts.
- The metaverse offers ubiquity and deterritoriality, posing challenges for the coordination of interventions and alignment with existing legislation. Culture and language are disruptive elements, and social work must develop or strengthen competencies to adapt to this new reality.
- Professional competencies in v-social work must focus on redefining competencies that relate to the ability to work and assess individuals, families, groups, organisations and communities' needs and circumstances in the virtual world, trusting relationships and collaboration take on a different meaning and require a redefinition of competencies.
- Specific competencies that require revision in v-social work include encouraging collaboration and client engagement, avoiding inappropriate relationships, explaining the intervention plan to stakeholders, setting realistic objectives, supporting the development of networks, advocating for individuals, families, groups, organisations and communities, ensuring that records are maintained in accordance with regulations and standards, and working effectively within interdisciplinary and multi-organisational systems, networks and teams to collaborate in setting goals, objectives and timelines.

Overall, *v-social work*, as part of the process of social work's response to the challenges of technology as a shaping element of society, poses unique challenges that require the development of new competencies to meet new social realities and vulnerability.

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