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ORIGINAL RESEARCH

First Nations Peoples' perspectives on telehealth physiotherapy: a qualitative study focused on the therapeutic relationship

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ABSTRACT:

Introduction: Relationships are the core of Indigenous Peoples' spiritual and cultural identities**,** and therapeutic relationships are an integral part of the physical rehabilitation process, directly influencing health outcomes. However, participating in therapeutic relationships can be difficult for First Nations Peoples, particularly in the virtual landscape. There is limited understanding of First Nations Peoples' perspectives on this issue, and this understanding is crucial to developing culturally safe and effective telehealth physiotherapy programs. Therefore, the purpose of this study is to explore the perspectives of First Nations Peoples from British Columbia, Canada, on telehealth physiotherapy, with an emphasis on the virtual therapeutic relationship.

Methods: A narrative qualitative study that utilized one-on-one, semistructured interviews was conducted with 19 First Nations adults from remote and rural First Nations communities in north-central British Columbia, Canada. Interviews were recorded, transcribed verbatim, and analyzed using an inductive approach to reflexive thematic analysis.

Results: Three themes emerged from data analysis. 'Therapist's attitude and rapport' captures participants' perceptions of what matters the most in how physiotherapists relate to First Nations Peoples and carry out their work. 'Remote nature of virtual care' encompasses the main challenges of virtual care visits, particularly how these were perceived to impact establishing and maintaining solid therapeutic relationships. 'Fostering culturally appropriate and safe telehealth physiotherapy' focuses on what is needed to advance telehealth physiotherapy in a manner that respects and reflects First Nations cultures, equipping all involved parties to provide comprehensive and sensitive services. Our findings advocate a hybrid model that combines in-person and telehealth visits to address communication barriers and the absence of physical interaction. Bridging the digital health literacy gap through training and collaboration with local support staff is crucial (as it is to bridge the possible cultural literary gap of therapists), and the incorporation of cultural elements holds promise for enhancing the engagement and effectiveness of telehealth services in these communities.

Conclusion: The pursuit of equitable health care for First Nations communities demands not only increased access but also a thoughtful, culturally safe, trauma-informed, and holistic approach. This approach must be tailored to the unique needs of First Nations Peoples, emphasizing the integration of cultural elements and community support. A hybrid model combining in-person and telehealth visits is recommended to address logistical challenges and enhance the therapeutic relationship, ensuring that care is both effective and respectful of cultural values and practices.

Keywords:

Canada, First Nations Peoples, Indigenous health, physiotherapy, qualitative, telehealth, telerehabilitation, therapeutic alliance, therapeutic relationships, virtual care.

FULL ARTICLE:

Introduction

The biopsychosocial patient-centred approach to care has emerged as a cornerstone in the field of health sciences and is recognized as a standard of quality clinical practice by several disciplines[1,2]. This holistic approach considers not only the biological aspects of an individual's condition but also their psychological and social dimensions[3]. Within this paradigm, the concept of therapeutic relationships has gained prominence as an essential component of therapeutic success[4]. While the importance of the therapeutic relationship has traditionally been highlighted in psychology and mental health research spanning over three decades, recent and growing evidence highlights its pivotal role in enhancing rehabilitation outcomes as well[5-8]. The therapeutic relationship is 'a trusting connection and rapport established between therapist and patient through collaboration, communication, therapist empathy and mutual understanding and respect'[4]. It is not merely what healthcare providers do but how they engage with their patients that may serve as a mediating factor in determining the success of rehabilitation efforts[9].

Relationality stands as a foundational principle of Indigenous cultures globally, underscoring the significance of relationships as the core of Indigenous Peoples' spiritual and cultural identity[10-12]. Within the healthcare context, a few psychology and mental health studies showed that the therapeutic relationship is a critical contributor to positive health outcomes among Indigenous populations[13-15]. However, there are many contextual factors rooted in colonial traumas shaping Indigenous Peoples' experiences with health care and how they engage with their healthcare providers, including language barriers, lack of cultural safety, abuse and discrimination experienced in the healthcare system[16-18].

Telehealth has the potential to enhance access to care barriers experienced by many Indigenous Peoples[19,20], but building trusting therapeutic relationships in the virtual scenario poses a potential challenge[21,22]. This difficulty may arise for varied reasons, including limited ability to interpret non-verbal communication, physical distance, technical issues making the conversation less personable, discomfort using unfamiliar technology, and lack of therapeutic touch[23-25]. The latter has been recognized as a tenet of the therapeutic relationship in physiotherapy[26]. Evidence suggests how touch and hands-on care can strengthen the therapeutic relationship by, for example, promoting biobehavioral synchrony (ie when different individuals harmonize their biological and behavioural processes during social interaction through the stimulation of mechanical receptors)[27].

In the virtual landscape, prioritizing relationality is imperative, acknowledging the impact of remote service provision on the dynamics of healthcare engagement. Understanding the perspectives of First Nations Peoples (one of the three main Indigenous groups in Canada) on telehealth physiotherapy is vital to ensure culturally safe and effective telehealth care delivery that aligns with their values and preferences and allows for virtual therapeutic relationship building. However, there has been limited research exploring First Nations Peoples' views on this topic. This is needed in order to develop guidance for organizations and clinicians who provide telehealth physiotherapy care. Therefore, the purpose of this study is to explore First Nations Peoples' perspectives on telehealth physiotherapy, with an emphasis on the

virtual therapeutic relationship.

Methods

Carrier Sekani Family Services (CSFS) is a First Nation-led organization that provides health and social services for 11 rural and remote First Nations in north-central British Columbia (BC), Canada. Through a community engagement process, CSFS leadership identified the need for this research in order to understand best practices for telehealth physiotherapy services for the member Nations.

Context and sampling

Between November 2022 and August 2023, we purposefully recruited 19 First Nations people, 19 years or older, from one of the 10 eligible CSFS Member Nations, in collaboration with CSFS staff and community representatives. The Carrier and Sekani People are the First Nations People of a large portion (more than 76 000 km) of North Central BC. Carrier Sekani First Nations comprises a population of over 10 000 individuals[28]. Carrier territories are, for the most part, sub-boreal forests dotted with numerous lakes and rivers. The climate is continental, and their traditional way of life is based on a seasonal round. Carrier People maintain a governance system commonly referred to as the *bah'lats* or potlatch[28]. Within the Carrier and Sekani traditional territories, distinct groupings maintain geographic and linguistic characteristics different from others. The names of each of the eight communities represented in our sample are Burns Lake Band, Cheslatta Carrier Nation, Nadleh Whut'en, Saik'uz First Nations, Stellat'en First Nations, Takla Nation, Wet'suwet'en First Nation, and Yekooche First Nation.

Although having experience with telehealth and/or physiotherapy was not mandatory, preference was given to those who had received it. Potential participants were informed of the study by clinicians and leadership within CSFS, and the research team contacted those interested by email or telephone call.

Researcher characteristics

One researcher (DPM) conducted all the semistructured interviews. DPM is a Latin-American White woman and a physiotherapist who moved to Canada to pursue her doctoral degree in 2021. She was trained in Western research methods and has been learning with great humility about Indigenous Peoples' histories and ways of knowing and being over the past 3 years. Two researchers (DPM and SM) analyzed the data. SM is a physiotherapist researcher from South Africa with qualitative research expertise. Despite their efforts to approach the research with humility and openness to Indigenous ways of knowing, their unconscious bias towards Western research and their origin from different countries and cultures might have influenced data interpretation. Yet researcher subjectivity, as long as it is disclosed reflexively, is something that can enhance the depth and richness of the analysis rather than be a source of bias that needs to be controlled[29]. The other authors (TH, KC, KH, and PC) are all Canadians, but no researchers identified themselves as First Nations people.

Design

This qualitative study applies a narrative design to gain an in-depth understanding of First Nations Peoples' perceptions of telehealth physiotherapy[30]. An experiential orientation was used, as it retains a focus on the participant's views. The ontology adopted is critical realism, and the epistemology is contextualism, providing access to participants' perceptions of (their) realities, which are partial, and shaped by and embedded within their cultural and historical contexts[31,32].

Data collection

Semistructured interviews were utilized to elicit robust data on participants' perceptions of telehealth physiotherapy. The interview guide (Appendix I) was produced in consultation with CSFS to ensure that open-ended questions focused on participants' perceptions of telehealth physiotherapy and the therapeutic relationship when using telehealth. Participants who did not have experience with telehealth and/or physiotherapy were asked to articulate what they would expect of telehealth physiotherapy should it be available in their community. This allowed a rich narrative between the first author and the participants, regardless of whether they had lived experiences or not. Interviews were conducted in English (which was the first language spoken by all participants) in person or using Zoom, each lasting about 45 minutes. All interviews were recorded using a digital voice recorder. The concept of data sufficiency was used to determine the sample size when the in-depth semistructured interviews with participants yielded enough information to achieve a thorough and nuanced understanding of the research question.

Data analysis

The interviews were transcribed verbatim, and the transcripts were coded and thematically analyzed using the Braun and Clark method[29], supported by NVivo v12 software (Lumivero; https://lumivero.com/products/nvivo) (Appendix II). After independently reading and re-reading the transcripts for familiarization, the researchers identified codes and emergent themes through a predominantly inductive approach to data analysis, where the focus was to unpack people's perspectives on the topic, using both semantic and latent techniques to explore meaning. Subject IDs were used to ensure the confidentiality of participants. Pseudonyms with descriptors are used when participants are quoted.

Rigour

To ensure credibility, researchers identified codes and emerging themes using dialogue, challenging each other's preconceptions and interpretations of meaning[33]. The first author documented her thoughts and also the participant's non-verbal communication (eg facial expressions) during the interviews and analytic process to assess reflexivity and to strengthen her ability to practice cultural humility[33]. Transcripts were member-checked by the corresponding participants following their interview to increase dependability[33]. The researchers recorded all decisions made during the analytical process to provide a clear audit trail to trace every decision easily[33]. Descriptions of participants' characteristics are presented along with illustrative quotes to facilitate the transferability of our results[33].

Ethics approval

This study was approved by the University of British Columbia (UBC H222-02383) and CSFS Research Ethics Boards. All procedures followed CSFS research guidelines, were overseen by CSFS, and were oriented towards the goals of the organization[34]. One research member (TH) is the CSFS Chief Administrative Officer

and was involved in the research design. In addition, we worked collaboratively with community representatives to identify and recruit potentially eligible participants, as well as to arrange and conduct the interviews in the communities. The First Nations principles of ownership, control, access, and possession (OCAP) also guided this work[35]. All researchers involved in the study procedures underwent cultural safety training. Informed consent for participation in the study was obtained, and permission for audio-recording was granted by each individual.

Results

A total of 19 individuals participated in the interviews. Participants' demographic details are outlined in Table 1. We recruited individuals from eight different communities. Seventeen (89%) of participants had prior experience with physiotherapy, but only five (26%) with telehealth physiotherapy. Of the two participants who didn't have experience with physiotherapy, one knew what physiotherapy was, and the other did not. Another two participants had experience with physiotherapy, but when asked about it they did not know that the service they received was called physiotherapy.

Most participants (74%) knew physiotherapy services were available in their communities. Nearly all were interested in this service after an explanation of what it was and agreed that there were people from their communities who would benefit from it. Over one-third of the participants expressed that they would like to see the service offered more often (when the current frequency reported was once a week). Importantly, there were comments regarding a lack of awareness about physiotherapy scope of practice and service availability:

> *I think that a whole lot of people could benefit from physiotherapy services, but they need to know that it's there. I think we should have all of our elders going to promote their mobility and learn from basic exercises they can do. Like, you're not going to ask questions about what you don't know, so I think that there's kind of a gap like people need to know how it can benefit them. (Mary, 51 years)*

In addition, there were comments about how the lack of practitioner availability may impact First Nations Peoples' health:

> *We don't have enough healthcare staff … and a lot of it is pain management. If they had access to a physiotherapist to deal with whatever injury they were dealing with, it would make all the difference. But instead, they turn to getting opioids off the street so that they don't have to be in pain anymore [with emotion]. (Amy, 45 years)*

Participants' attitudes towards telehealth were positive, with comments about increased accessibility and convenience of healthcare services:

> *You don't have to get in your vehicle and leave too far of a distance; you're just right here at the health center instead of driving in the wintertime all the way across town, and that's just like, you never know what's going to happen on the road. Without telehealth, where would we be without that? It's convenient in a lot of ways for a lot of us. (Chloe, 48 years)*

Sixteen participants (84%) had experience with telehealth. Seven participants (37%) strongly preferred in-person visits because they perceived telehealth as less personable and efficient: 'I'm old school, I like to talk to the person in person' (Ian, 65 years). Three participants (16%) did not have experience with telehealth, and another two (11%) were unfamiliar with this term or virtual care. When asked specifically about telehealth physiotherapy, five individuals (two who experienced telehealth physiotherapy, one who experienced telehealth and physiotherapy separately but not together, and two who did not experience telehealth or physiotherapy) expressed negative opinions: 'I don't think that you can have telehealth for physio' (Amy, 45 years). Even so, most patients had positive perceptions and expressed interest in utilizing telehealth. Access to videoconference was regarded as important:

> *Definitely video over telephone. Faces are important, like in-person reading the whole body is the best case scenario, but at least with the video, you know you're being heard, and you know that that person is paying attention. (Rose, 40 years)*

Some situations considered suitable for telehealth physiotherapy from participants' narratives were follow-ups, education, exercises (some people said that they would be particularly interested in group sessions), and mobile applications with reminders about treatment.

Three main themes emerged from reflexive thematic analysis (Fig1): (1) therapist's attitude and rapport, (2) remote nature of virtual care, and (3) fostering culturally appropriate telehealth physiotherapy. Table 2 shows the themes, subthemes, processes, and examples of participants' quotes.

Table 1: Demographic information of participants

Characteristic (*n*=19)	%/mean±SD
Age (years)	57±11.4
Age ≥60 years	47
Female	63
Interview type	
In-person	84
Virtually	16
Rural living environment[†]	
Yes	68
No	32
Self-reported health conditions	
Arthritis	16
Cancer	5
Chronic pain	26
Chronic obstructive pulmonary disease	16
Cardiovascular disease[¶]	26
Stroke	11
Experience with physiotherapy treatment	
Yes	89
No	11
Experience using telehealth services	
Yes	84
No	16
Type of telehealth technology used	
Email	11
Telephone	68
Text message	21
Videoconference	68

[†] Although most Carrier Sekani Family Services communities are located in rural areas, some participants are not currently living in these communities because they moved to near urban centers.
[¶] CVD includes hypertension, diabetes, and heart diseases.
SD, standard deviation.

Table 2: Therapist's attitude and rapport, remote nature of telehealth appointments, and fostering culturally appropriate telehealth physiotherapy: theme development and examples

Theme	Subtheme	Processes	Examples
Therapist's attitude and rapport	Personable connections	Knowing the individual and their unique context	'I guess it comes back to like the trust … and the personalization [of care] and the familial bond. Even if you're not family but everything to a Native people is very family-oriented.' (Tom, 42 years)
	Empathetic care	Being passionate about what they do and genuinely care about their patients	'[The therapist] is always very concerned about how I feel. They totally care about all their patients. And [it is] not just me, but other patients also that went to see them they just love them cause how they treat us.' (Lucy, 74 years)
		Therapeutic listening	'I don't want to go in with an issue and be made to feel like I'm just making it up, or crazy, or blowing it out of proportion ... [the therapist needs to] kind of really pay attention to what I'm saying and look into it.' (Val, 45 years)
	Collaborative engagement	Equalizing power dynamics	'And she [the therapist] is like "I will not be interviewed by you". So I go "well then we're not gonna work together" [Laughing], you know it was a very top-down approach. She's the doctor and she says what goes. No, that's not how it is.' (Mary, 51 years)
		Respecting individual's autonomy	'… like it's important for all healthcare providers to remember that we're just a team, part of a team for this person and the individuals who are receiving health care, they have the autonomy over themselves. So that's why it's so important to share information so they can decide what to do and understand further, cause our job should be to help people to live better understand how to live better, not just do as they say …' (Mary, 51 years)
		Reaching mutual understanding	'I want to work with somebody that understands me. So I could improve me.' (Bob, 75 years)
	Professional expertise and trust building	Developing trust and confidence	'… it's extremely important to be able to have a trusting relationship with … a physiotherapist because a lot of times a lot of us, um, have been touched inappropriately, we've been hurt, we've been victimized, we've been victims of crime, we've been, you know like forced to do things against our will throughout our lives.' (Amy, 45 years)
		Demonstrating professional skills, knowledge, and ability to meet individual's needs	'… when you talk to healthcare providers whether it's mental health, physio, doctors, they need to know and they need to come across as knowing what they're doing.' (Rose, 40 years)
Remote nature of virtual care	Communication is less effective	Virtual communication challenges at the individual level	'… when you're meeting with the therapist in-person you actually know how to communicate with them and then doing it over telehealth, you don't know like "oh should I ask him this or should I ask him that" … you're like nervous as you're talking to a screen …' (Chloe, 48 years)
		Therapist disengagement in virtual appointments	'Telehealth was okay, I just didn't feel really heard as much as I'd like to have been.' (Anne, 54 years)
		Need for health education	'Well for one thing I don't really understand a lot of things and they use really big words, um, I want to understand and they got to really explain to me, what they're talking about …' (Zoe, 69 years)
		Technological glitches	'I think that a big part of it was that professionals were trying to, they spent more time trying to address and fix technical issues than addressing the appointment itself and so there was always, you know, like fixing of this and that …' (Amy, 45 years)
		Environmental challenges	'... in real life it gets crazy like I won't be able to do it at my home because I have two German shepherds who like to bark around when I'm talking on the phone so I'd probably come to the Health Center to do it because then I'll be a quiet place.' (Pam, 48 years)
	Absence of physical interaction	Concerns about specificity and efficacy of treatment	'If I phone them [therapists] over the phone, what they gonna do, fix me over the phone? I don't think so.' (Ted, 65 years)
		Less-rigorous monitoring due to limited visual feedback	'… what is not helpful is that he can't show me what to do and [see] if I'm doing it wrong.' (Meg, 60 years)
		Concerns about the accuracy of assessments	'If you need a physical examination, if you're presenting 'cause you have some strange bump or, you know, like those things need to be assessed properly and that's hands-on or is it musculoskeletal, you know, you couldn't do that over [telehealth].' (Mary, 51 years)
	Concerns about privacy and confidentiality	Fear of virtual confidentiality breaches	'This is a Native reservation where we've been under the thumb of the government or the British Empire for certain reasons throughout history, it's not a nice relationship, so it's like – not to be all paranoid – but it's always like what are they doing now, you know, like are they experimenting on us, what's going on?' (Tom, 42 years)
Fostering culturally appropriate telehealth physiotherapy	Trauma-informed and holistic care	Therapists' sensitivity towards trauma and need to see each individual holistically	'… do they value spirituality, do they value the mental and the emotional stuff, because as Indigenous people there's stuff that we take into consideration at the cellular level so sometimes there's cellular trauma and do they take stuff like that into consideration?' (Amy, 45 years)
	Relational consistency and continuity	Therapists' need to be present and acknowledge that relationship building takes time	'… when they [Indigenous people] get used to you, don't leave them for a couple months and think they're still gonna be there when you come back because it takes a long time to get their trust and when they don't know where you've gone it's not easy to bring them back in here.' (Anne, 54 years)
		Choosing a hybrid model of care whenever possible	'Maybe it could be coupled with in-person and online, first we see you and then give you some exercises and let's touch base over technology and then we'll meet again, you know. Like it could be incorporated but I don't think that it's being the standalone service I think would be a disservice to people.' (Mary, 51 years)
	Telehealth assistance	Providing telehealth training	'Nobody knows how to use anything like that … So yeah, they [community members] needed it [training]. Maybe even me too because I don't know I've never used it, right.' (Tom, 42 years)
		Having onsite support staff	'Maybe it is good for another person to be with you in the room and talking to the physiotherapist. That way they'd know what you're going through on the TV [screen].' (Jane, 61 years)
	Cultural integration	Making therapy goals culturally relevant	'I fish in the river for my elders and that's how else I got a hurt arm … From fishing in the river like using a salmon rod … And so maybe that kind of aspect of teaching us better way to do it. Like there's people here that pack moose out of the bush and how should we lift them up or, you know, without getting hurt and some people don't know that, they just "oh I'm tough" and they'll lift it up and still get hurt.' (Pam, 48 years) 'I guess if you are able to bend and walk and run and do things, if you have a nice range of mobility and strength you can hunt and fish a lot better. Uh, you can take care of your elders much better like shovelling driveways or doing firewood for them. So [physical therapy] it's gonna give you the vigour or the life force … that you need to keep going working on the land or in the community the way you need to be working. I guess it's more about like explaining … Culturally, if you want them to think it's important, it's outlining the benefit …' (Tom, 42 years)
		Practical implementation strategies	'I don't know, a prayer can be done virtually, shared stories maybe. Uh, looking at experiences like sharing experiences could be another.' (Amy, 45 years) 'I wouldn't mind, learning about the herbs and the elders knows about the medication, the Indian medicine that they have.' (Meg, 60 years) 'Bring the monitor outside in the bushes.' (Ken, 45 years) 'I think just make them feel like they're valued or have fun maybe, make it fun.' (Pam, 48 years)

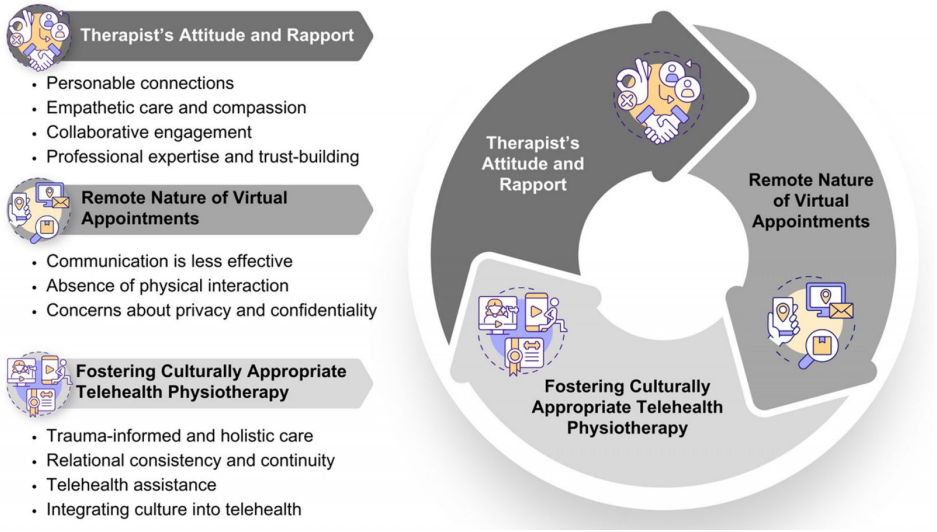

Figure 1: Graphic representation of themes and subthemes.

Theme 1: Therapist's attitude and rapport

This theme captured participants' perceptions of what matters the most in how healthcare providers, specifically physiotherapists (for those who had experience with physiotherapy, *n*=17), related to participants and carried out their work. The following data developed as subthemes.

Personal connections: Therapists' efforts to get to know the individual's unique context and connect with them on a human level appeared to be an important element of the therapeutic relationship for several participants. Participants often expressed similar views:

> *It's not just about helping us, it's about getting to know us too, I guess … Know about my Nation, what am I about, what are my people about, what do we need and how could you help … (Pam, 48 years)*

While most clients valued this closer familiarity, there were a few others who held a more detached perspective:

> *I want them [the therapists] to be more professional and not talk about [personal interests] … I want him to tell me, you know, I could do this for you, and we'll take it step by step for you to get better. (Bob, 75 years)*

Empathetic care: Participants appreciated therapists who are passionate about what they do, as exemplified in this comment:

> *I just wish we had more people with big hearts … [laughing] That love to work with the patients around here. (Ted, 65 years)*

These professionals were perceived as having a better ability to transmit empathy and a genuine interest in the individuals and their outcomes, which was considered fundamental to building trust and rapport. Mary (51 years) talked about an unmet expectation for an empathetic understanding of her biopsychosocial needs and the importance of feeling valued by the therapist:

> *I said something, and she [the therapist] didn't even pick up on it. She didn't basically care, and I just thought 'You're not getting holistic health'. So, the next time I asked her, I just want to know that if you're providing service to me, that I'm important to you.*

Another important component of empathetic care is therapeutic listening, and many participants expressed the importance of feeling heard and validated without judgment:

> *They [the therapist] would be sitting there, typing on the computer, looking through things, and I'd be telling them what was wrong with me and 'Oh, what did you say?' That's really upsetting when somebody doesn't listen to you. (Meg, 60 years)*

Collaborative engagement: A collaborative engagement appeared to develop from a mutual understanding of both the therapist's and the client's values and beliefs:

> *To build a good relationship both the patient and the physio have to come in with an open mind to build, to be able to meet philosophies, because you're not always gonna agree with somebody's philosophy but if you have an open mind on either end you could still find a place to work together … (Rose, 40 years)*

It also developed from respect for individual autonomy in their health-related decision-making:

> *I believe from the Indigenous point of view that all people have a right to their own mind, bodies, and spirits, and they are the arbiter of all of those decisions, and we don't have a right to tell other people what they should and shouldn't be doing. We don't have a right to be exerting ourselves in other people's spaces. (Amy, 45 years)*

Moreover, participants expressed the desire to be considered equals in the therapeutic process. They wanted to feel that their expert knowledge and contributions are valued, as this was seen to foster dignity and empowerment.

Professional expertise and trust-building: Therapists need to demonstrate professional skills, knowledge, and ability to meet individual needs in telehealth, as these reflect on the individual's capacity to trust the therapist and be confident in the proposed

treatment. One participant said:

> *You have to be confident in your health provider's knowledge base, so I think that's important to be shared and get to question or ask things. (Mary, 51 years)*

Theme 2: Remote nature of virtual care

This theme encompassed the main challenges of virtual care visits, particularly how these were perceived to impact establishing and maintaining solid therapeutic relationships.

Less efficient communication: Many participants shared difficulties in effectively communicating during virtual visits, for varied reasons like getting nervous, 'With the telehealth you kind of get nervous and you forget things to say' (Anne, 54 years), or just feeling that it is easier talking in person as opposed to a screen or over the phone:

> *You're used to communicating with a human being and then [in telehealth] you're talking to a machine, I don't know … [chuckles] (Joe, 72 years)*

Some participants had the impression that the therapist was less invested in virtual appointments compared to in person:

> *There were times when I met a physiotherapist and you could tell that their head was elsewhere and you could see that they weren't really invested in or kind of wanting to work with you. (Amy, 45 years)*

Health literacy was a challenge that seemed to be exacerbated in virtual care visits, and there were comments about the need for therapists to avoid using medical jargon and to help clients understand their health condition and treatment:

> *If you're gonna help me, you would need to talk to my level and all, just tell me the message, tell me how to write, you know, don't use the medical terms I'm not gonna understand. (Bob, 75 years)*

Technological glitches were also mentioned as something that disrupted communication and could become the focus of the visit if persistent. Finally, environmental challenges were described as barriers to effective communication and good-quality telehealth visits. For example, one participant said:

> *There's people running here and there at my house, and then sometimes not being able to focus on doing the exercises on hand because your kids are fighting or they're screaming, and you're not getting that time to just focus. (Amy, 45 years)*

Absence of physical interaction: While a few participants said that the lack of physical touch would not affect their ability to connect with the physiotherapist, others expressed the opposite opinion:

> *Touch is a very important part of human communication and trust-building. So, I think that that does impede the dynamics of it. (Mary, 51 years)*

Some participants were particularly concerned about the lack of specificity of treatment:

> *I feel more frustrated [using telehealth]. I don't have as much confidence in doing it by myself because I know you have to move your body in very specific ways. Then if you don't, it causes you damage … so they [physiotherapists] need to physically move me and show me how to do it. (Amy, 45 years)*

They perceived the absence of or limited visual feedback to impede rigorous monitoring of exercises. Concerns about the accuracy of assessments were also expressed:

> *In physio[therapy] they're like 'Oh, I'm gonna put my finger behind your knee and now squeeze it or whatever', and like testing your ligaments or whatever, they [physiotherapists] got to dig in so much and like 'Does this hurt?' or 'Let me work your' … so yeah, I think the hands-on stuff would be lacking. (Tom, 42 years)*

Concerns about privacy and confidentiality: Some participants considered the telehealth environment less private. A situation that corroborates this is the presence of other people in the background of the professionals:

> *With professionals and specialists that are working from home, lots of times there were people in the background, they have their husbands, or wives, or children or whoever … they're walking in the background, they're peeking in sometimes … and I don't think that that's right at all. (Amy, 45 years)*

On their end, First Nations Peoples may be worried about how much of their private space the camera will show on videoconferences:

> *Some of the community members, they don't understand the telehealth here, and they think it's non-confidential … because it's over the screen and the screen shows everything … (Chloe, 48 years)*

Paradoxically, there was also a comment favouring the privacy of home-based telehealth visits as opposed to having to go to the health center:

> *Just like if it was in your own home then other people are not hearing what's going on here, or nobody sees you or you know. So it'd be really good with telehealth physio. Where nobody could harass or knock on the door. (Pam, 48 years)*

Another point was the lack of confidence in data security management:

> *You just don't know who's hack[ing] it, like you know, if I was a computer whiz, I can hack your profile and … use the information against you or whatever … I just don't trust it. (Ian, 65 years)*

Theme 3: Fostering culturally appropriate and safe telehealth physiotherapy

This theme focuses on what is needed to advance telehealth physiotherapy in a manner that respects and reflects First Nations cultures, equipping all involved parties to provide comprehensive and sensitive services. Appendix III is a vignette on the implementation of a hybrid model for telehealth physiotherapy in First Nations communities based on the respondents' suggestions and the researcher's perspectives.

Trauma-informed and holistic care: Building trusting relationships with healthcare providers may be challenging to many First Nations People due to the profound impacts of colonization, racism, and social marginalization on their health

outcomes and healthcare experiences. This was perceived to be potentially more challenging over telehealth visits:

> *… so many [First Nations] Peoples have faced so much negative in the system that it's really hard, like there's so many biases that people don't even realize they have them, so like… Indigenous people are already hesitant when it comes to health care that it would make a telehealth appointment a little more tricky. (Rose, 40 years)*

In light of this, therapists' sensitivity towards trauma and a holistic approach to health that aligns with First Nations views and considers not only the physical but the emotional, mental, and spiritual aspects of an individual's wellbeing were things that the participants wanted to have:

> *We should be having trauma-informed health services in every aspect of health … I think that we have to remember that we're holistic beings so we need to come at it through a holistic view. (Mary, 51 years)*

Relational consistency and continuity: Participants acknowledged that building relationships takes time and highlighted that it is particularly difficult when rotating healthcare providers do not visit the communities regularly:

> *Just about every time you go see a doctor it's a different one, and you can't establish a good relationship that way. (Ted, 65 years)*

Many shared that seeing the physiotherapist in person from time to time, instead of making all visits via telehealth, would facilitate relationship building. Having an established relationship through in-person visits can help the transition to telehealth visits:

> *Because of the existing relationship with the physio from attending the office, because it was a good existing relationship, it was nice to be able to chat [via telehealth] and like 'cause that relationship was already built. (Rose, 40 years)*

Telehealth assistance: Most participants felt comfortable using technology, but there were a few who expressed the need to receive training to be able to engage with telehealth comfortably:

> *Take me out of the old school thinking, you know, maybe [with] a little bit of training … Not just throw it [telehealth] in your face and here! … train me so I could gain trust with using telehealth. (Bob, 75 years)*

Furthermore, having local telehealth outreach workers serving as a liaison between the professional and the local community can be a valuable way to establish trust and support with setting up the telehealth equipment:

> *Having that support [onsite] would also be a good place to build a relationship to pass on to the provider on the other end. (Rose, 40 years)*

Cultural integration: Participants who had previous experience with telehealth generally felt safe during their virtual visits. There was one participant who saw telehealth as a potential threat to cultural safety:

> *It just takes away, so like, culturally I don't think that there's a match. For me, culture is community, and culture is human interaction. Culture is coming together. Culture is doing things on a personal one-to-one or, you know, communal level. (Amy, 45 years)*

Some participants indicated that there are aspects of their culture that they prefer to keep private, 'A few things like in my culture I like to keep private' (Ian, 65 years), while others simply said that they do not think that culture needs to be part of telehealth physiotherapy: 'I don't think culture needs to be involved at all' (John, 63 years). Yet, the majority of participants were in favour of cultural integration and shared suggestions regarding how to do it:

> *I'm all for cultural integration into anything in our lifestyles. Our people, we kept fit in certain ways, and if we could integrate that into the therapy, that would be an awesome idea, really. (Emma, 45 years)*

By tailoring physiotherapy interventions to align with Indigenous cultural activities, such as traditional dance, individuals are more likely to engage and commit to their rehabilitation process:

> *I think culture can be combined with physio in the way of like dance and stuff like that, like traditional dance and movements medicine. I think that is so important for movement. (Mary, 51 years)*

Making therapy goals culturally relevant was suggested, outlining the benefits of physiotherapy in improving their health and allowing them to fully participate in their cultural activities, like fishing or taking care of the Elders. Other strategies that could be adapted to the virtual scenario, voiced by the participants, included prayers, sharing stories, creating space for traditional medicine, making appointments outdoors in nature, and using humour judiciously or making therapy fun (see Table 2 for quotes supporting these findings).

Discussion

Our findings suggest that there is a need to increase awareness of and access to physiotherapy services for First Nations Peoples, especially those living in rural and remote communities, and that people would be interested and open to using telehealth to bridge the access gap. However, participants underscored the need to address some of telehealth's perceived limitations to ensure quality of care, which includes being able to build and maintain trusting therapeutic relationships. Not all participants were receptive towards engaging with telehealth physiotherapy services, reinforcing evidence about the need to take patients' personal preferences into account when choosing the health service delivery medium in line with patient-centred care[36].

Before exploring the differences between building relationships in person and by telehealth, theme 1 captured what matters most in the therapeutic relationship from the perspective of First Nations Peoples. Therapists wanting to know the people and their unique context was emphasized to develop personal connections, an important aspect of the therapeutic relationship for most participants. In a cross-cultural setting where power imbalances linked to colonization and healthcare relationships play a role, a visitor (eg non-Indigenous professional) should personally take on the responsibility of learning about the culture, primarily through attentive and respectful observation and gradual participation[37]. Cultural safety training and face-to-face interactions play a critical role in this learning process. The literature emphasizes that in-person visits allow healthcare providers to engage in direct

observation and participate in the community's daily life, fostering a deeper understanding of the cultural and social context of their patients[21,22,38]. These interactions help build trust, which is foundational in therapeutic relationships, especially in communities with historical experiences of marginalization and mistrust of the healthcare system[39].

Addressing the disempowerment potentially experienced by First Nations Peoples in their interactions with healthcare providers can help foster a collaborative engagement and welcoming therapeutic relationships, which most participants desired[40]. Although physiotherapists need to demonstrate their professional expertise to enable patients' trust and confidence, the way in which knowledge is shared with First Nations Peoples can 'make or break the relationship'[41]. Throughout history, colonizers have consistently dictated to Indigenous Peoples what they need[42]. To enable trusting therapeutic relationships, it is critical to move away from the idea of 'expert physiotherapists' who will tell them what to do or attempt to 'fix' them to allies who value their own expert knowledge and culture, respect their autonomy, and genuinely care about them and their outcomes[43,44]. A practical way to demonstrate empathetic care, which aligns with the fundamental principle of cultural humility, is to speak less and listen more, creating opportunities for new knowledge[45,46]. Effective listening is crucial in telehealth interactions to ensure patients feel understood and valued. When patients feel listened to during telehealth consultations, they are more likely to be satisfied with the service, which can result in better engagement and adherence to treatment plans[47,48].

Communication was viewed as one of the main challenges of virtual care visits, negatively impacting therapeutic relationship building. Evidence suggests that patients ask for information to be reiterated more frequently in telehealth visits[49]; however, individuals with low health literacy are less likely to indicate if they do not understand something[50,51]. There is a general agreement that telehealth practitioners need advanced communication skills to offset the lack of visual cues[52]. On top of that, contextual shapers like technological glitches due to poor connectivity and environmental challenges (eg overcrowded houses) have been identified in our study and in previous studies[53]. Physiotherapists should take these factors into consideration when choosing between telehealth or in-person visits. If telehealth is deemed appropriate, strategies to mitigate miscommunication should be adopted, like ensuring a quiet space with a reliable internet connection, avoiding the use of medical jargon, and establishing a contingency plan in case of technology failure[54]. Conducting virtual visits in a quiet and private space can also contribute to minimizing concerns about privacy and confidentiality. In addition, both parties are encouraged to use headphones and artificial backgrounds, keep their microphones muted when not speaking, and use the chat function whenever appropriate[53,55].

While the absence of physical interactions was seen as a limitation of telehealth, its main implication was not directly related to the therapeutic relationship but the limited scope of physical examination and treatment. Most participants said that the lack of therapeutic touch did not or would not affect their ability to develop rapport with the physiotherapist, but they thought that physiotherapists could not effectively assess, treat, or supervise their exercises via telehealth. Digital physiotherapy assessments through synchronous telehealth demonstrate validity and reliability[56,57], but there are other studies showing that patients deemed face-to-face assessment as more effective[58]. Concerns with the quality of feedback provided and insecurity about their own exercise abilities in the absence of direct in-person supervision have been reported before[59]. Considering that, as raised by some participants, many First Nations people may not know what physiotherapy is and how it can help due to limited access to this service, our findings suggest that it would be beneficial to have at least the initial physiotherapy visit in person. This can help establish the therapeutic relationship, facilitate physical assessment and exercise prescription, and improve patients' self-efficacy[60]. In fact, combining in-person with telehealth visits (ie a hybrid model) can offer a more complete and personalized rehabilitation experience[61,62], ensuring relational consistency and continuity.

The need for telehealth training in equipment operations was a key finding that has been highlighted before[63]. Moreover, physiotherapists are encouraged to work in collaboration with local support staff who can assist patients with equipment set-up for their virtual visits and also play a role as cultural liaisons, mediating trust building with the therapist[64]. This strategy can be particularly effective for Indigenous communities, given their strong communal bonds and propensity to engage openly and collaboratively with all community members[41].

The need for culturally safe approaches to First Nations health is overwhelmingly supported by experts in the field, and this includes the adoption of trauma-informed and holistic care[65,66]. Most participants were supportive of cultural integration into telehealth physiotherapy visits, and the main suggestion was aligning therapy with cultural practices like traditional dance and ceremonial activities and making therapy goals culturally relevant (eg improving their strength and range of motion so that they can go hunting or berry picking more effectively and without pain). This could even be done outdoors in nature using portable technology, as suggested by one participant. Land-based activities have been shown to improve the health and wellbeing of Indigenous adults[67], and physiotherapists working with First Nations communities recommended expanding activities and treatment to the land and culture as part of an innovative way to deliver rehabilitation services that are culturally relevant and effective[64]. To effectively implement these approaches, first and foremost, telehealth and cultural integration need to be an individual's choice and not something imposed. If an individual is interested, it is crucial for physiotherapists to understand the environment in which the patient lives and tailor their care accordingly. As previously stated, this might involve in-person community visits and cultural safety training. However, it is important to acknowledge that relying solely on cultural safety training can be problematic, as such trainings often focus on cultural aspects alone and can overlook broader frameworks like social determinants of health and social justice[68,69]. This can inadvertently lead to stereotyped notions of culture and 'othering' practices[68,69]. Therefore, to learn about the specific histories, cultures, and knowledge systems of the people served, physiotherapists are also encouraged to engage with continuing education in partnership with knowledge keepers, Elders, and other Indigenous leaders[70].

This study has some limitations. First, while compensation can aid in recruitment and is an ethical way to acknowledge participants' time and knowledge shared, it may have influenced their responses during interviews. Second, although generalizability is

typically not a primary goal of qualitative research, the specific focus of this study – telehealth physiotherapy and its impact on therapeutic relationships within First Nations communities in North Central BC, Canada – means that findings should be cautiously interpreted outside this particular context. However, by providing a transparent report of the methods and detailed descriptions of the phenomena under investigation, we enable readers to make informed decisions about the transferability of these findings to other contexts. Finally, the researchers acknowledge that their own positionality and perspectives may have influenced how the research was conducted and interpreted, which is an inherent aspect of qualitative research. Future research should explore the implementation and evaluation of hybrid models that combine in-person and telehealth visits to enhance the accessibility and effectiveness of physiotherapy services for First Nations and other Indigenous communities.

Conclusion

Our study provides in-depth insights into First Nations Peoples' perceptions of telehealth physiotherapy to inform remote physiotherapy service delivery. While there is a need to expand access to physiotherapy services, the implementation of telehealth must navigate the nuanced landscape of building and maintaining trusting therapeutic relationships. The importance of cultural safety cannot be overstated, with a call to move beyond the traditional roles of professionals as experts to allies who respect First Nations Peoples' autonomy and value their knowledge, experiences, and culture. Communication barriers and the absence of physical interaction pose significant challenges, although the latter was not directly related to the therapeutic relationship but the limited scope of physical examination and treatment. Our findings advocate for a hybrid model, combining in-person and telehealth visits to ensure comprehensive rehabilitation experiences and support the maintenance of the therapeutic relationship. Addressing the digital health literacy gap with telehealth training, coupled with collaboration with local support staff, emerges as a crucial aspect of successful telehealth physiotherapy implementation. Moreover, the incorporation of culture, aligning therapy with traditional practices and land-based activities, reflects a promising avenue for enhancing the effectiveness and relevance of telehealth services for First Nations Peoples.

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Conflicts of interest

The authors declare no conflicts of interest.

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APPENDIX I:

Appendix I: Interview guide

Demographics

Name
Age
Gender
Nation/band
Chronic condition/medication

Telehealth usage and acceptance

1) Can you tell me what you understand by telehealth?
2) Could you explain to me why your healthcare was switched from in-person to telehealth care?
   - How prepared did you feel to use this new type of healthcare service?
3) Can you describe how you have used telehealth over the past year?
   - What type of telehealth services have you used? *(eg videoconferencing, telephone, text messages or other)*
   - More specifically, what type of telehealth services have you used for the physiotherapy appointments?
   - Reasons for using?
4) How do you feel about using telehealth services to support you in taking care of your health condition?
   - What did you find helpful/not so helpful about telehealth?
   - How easy was the technology to use?
5) Can you describe how your experience with telehealth changed over time?
6) Overall, what is your opinion about the efficacy and appropriateness of telehealth?

Experiences with telehealth – consultation process, relationship with the physiotherapist

7) How do you feel about the relationship that a patient should have with their physiotherapist?
8) Can you describe your relationship with your physiotherapist?
   - How do you think having a good relationship with your physiotherapist may influence treatment outcomes?
9) Can you think about any differences in your relationship with your physiotherapist while using telehealth compared to in-person? ie conversations, interactions, feelings you get
   - If no in-person experience, do you think there would be any changes? If so, please explain.
   - Is there anything you do that is different when seeing the physiotherapist by telehealth than meeting face-to-face? What? *(eg eye contact, speaking up louder, etc.)*
   - Please tell me about your ability to openly communicate your concerns to your physiotherapist during telehealth visits versus in-person visits.
   - Is the lack of physical touch something that influences your ability to connect and/or trust the physiotherapist? How so? *(eg less confidence in how to perform the exercises at home without supervision)*
10) When using telehealth, please explain how you feel about the physiotherapist's ability to let you tell your "story"? i.e. giving you time to fully describe your condition in your own words, paying close attention to what you were saying, and asking for relevant details about your situation.
11) How do you feel about the physiotherapist's ability to explain things clearly via telehealth? ie fully answering your questions, explaining clearly, giving you adequate information, not being vague.
12) How do you feel about the physiotherapist's ability to show care and compassion via telehealth? ie seeming sincerely concerned, connecting with you on a human level, not being indifferent or "detached."
13) How do you feel about the cultural safety aspects of telehealth? ie feeling safe and respected when interacting with the physiotherapist and having a voice in the decision-making of your treatment.
14) Can you share any behaviours, feelings, and/or attitudes that have helped the development of a good relationship with your physiotherapist during a telehealth visit? *(eg the physiotherapist making you feel at ease with the use of technology, communicating that he/she had accurately understood your concerns)*
15) Can you share any behaviours, feelings, and/or attitudes that have made it difficult for you to develop a good relationship with your physiotherapist during a telehealth visit? *(eg the physiotherapist overlooking or dismissing your concerns; interrupting and/or rushing you)*

Recommendations for Telehealth

16) What are some ways that culture/cultural activities could be integrated into or combined with telehealth programs?
17) How do you think technology may be used to support you in developing a strong relationship with your healthcare providers?

Closing questions

18) Is there anything you would like to share or recommend being considered by clinicians to improve telehealth service provision that I didn't ask?

Closing & thank you

19) Thank you, those are all the questions I have. Do you have any questions or concerns before we start the recording? I want to thank you for taking the time to participate in this project.

Appendix II: Qualitative data analysis details

This table contains the full details of the 6 steps used in the qualitative interview study. The table has been taken and adapted from: Clarke V, Braun V, Hayfield N. Thematic analysis. In: JA Smith, ed. *Qualitative psychology: A practical guide to research methods*. London: SAGE Publications; 2015: 222-248.

Step	Details/aims of step
1: Familiarization with data	Reading and re-reading the data, noting down initial ideas.
2: Generating initial codes	Coding interesting features of the data in a systematic manner across the data set, collating data relevant to each code. End phase with a collection of possible themes and subthemes.
3: Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme. Consider the relationship between codes, themes, and levels of themes.
4: Reviewing themes	Checking if the themes work in relation to the coded extracts: Level 1 – read the extracts for each theme and to see whether they form a coherent pattern. Level 2 – does the thematic map reflect the meanings in the entire data set as a whole? Re-read entire dataset, check whether the story fits, and that nothing is missed. This phase results in a thematic 'map' of the analysis.
5: Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme. This stage produces a narrative for each theme.
6: Producing the report	Selection of rich, compelling extract examples, final analysis of selected extracts, relating the analysis back to the research question and literature, producing a scholarly report of the analysis.

Appendix III: Implementing a hybrid model for telehealth physiotherapy in First Nations communities

The hybrid model of physiotherapy combines in-person visits with telehealth services, aiming to provide comprehensive, culturally sensitive care to First Nations People, particularly those living in rural and remote communities. This approach addresses the unique challenges faced by these communities, such as limited access to healthcare services, technological barriers, and the need for culturally appropriate care. Essential for this model to work is the paradigm shift of physiotherapists' traditional roles as experts to allies who respect First Nations Peoples' autonomy and value their knowledge, experiences, and culture.

IN-PERSON VISITS
Initial Assessment and Relationship Building
Personal Connection: The initial in-person visit is crucial for building a personal connection between the physiotherapist and the patient. This visit allows the physiotherapist to understand the patient's unique context, culture, and health needs. It gives the physiotherapist an opportunity to better transmit empathy and a genuine interest in the patient and their outcomes.
Comprehensive Physical Examination: Conducting a thorough physical assessment can help with trust-building and facilitate diagnosis and personalized treatment plans. It gives an opportunity for physiotherapists to show professional skills (eg demonstrate specific exercises and techniques, providing hands-on guidance), knowledge, and ability to meet individual needs.
Periodic Follow-Ups
Maintaining Continuity: Regular in-person follow-ups help maintain continuity of care, allowing therapists to reassess progress, adjust treatment plans, and strengthen the therapeutic relationship.
Trust and Rapport: Periodic in-person interactions reinforce trust and rapport, essential for effective healthcare delivery in First Nations communities.
TELEHEALTH VISITS
Types of Telehealth Services
Follow-Up Appointments: Virtual follow-ups can effectively monitor progress, answer questions, and provide ongoing support.
Education and Exercise Demonstrations: Therapists can use videoconferencing to educate patients about their conditions, demonstrate exercises, and ensure proper technique.
Group Sessions: Telehealth can facilitate group exercise sessions, promoting community engagement and peer support.
Local Telehealth Outreach Workers
Technical Assistance: Local support staff can assist with setting up telehealth equipment, ensuring smooth communication during virtual visits.
Cultural Liaison: These workers can act as cultural liaisons, helping to bridge any cultural gaps between the therapist and the patient, and reinforcing trust within the community.
Cultural Integration
Trauma-informed and Holistic Approach: Therapists' sensitivity towards trauma and emphasis in a holistic approach to health, which includes physical, emotional, mental, and spiritual well-being, aligns with First Nations perspectives on health.
Cultural Relevance: Incorporating traditional land-based activities into therapy goals can enhance patient engagement and adherence to treatment plans. Facilitating telehealth visits outdoors in the nature, making therapy fun, allowing space for prayers, sharing stories, and traditional medicine, are all practices that can support telehealth experiences.
Overcoming Technological Barriers
Investment in Technology/Infrastructure: Ensuring reliable internet connectivity and access to appropriate telehealth devices is critical for seamless virtual care.
Technical Training: Providing patients and community support staff with training on how to use telehealth technology effectively can reduce the likelihood of technical issues and increase users comfort and willingness to engage with telehealth.
Backup Communication Methods: Having alternative communication methods, such as phone calls or messaging, ensures continuity of care if video connections fail.
Addressing Confidentiality and Privacy Concerns
Data Security: Using secure, encrypted telehealth platforms is paramount to protect patient information and maintains confidentiality.
Privacy Settings: Patients need to be taught and informed that they can use privacy settings, such as blurred backgrounds, to protect their personal space during virtual visits.
Private Spaces: Encouraging patients to conduct telehealth visits from a private, quiet space minimizes the risk of privacy breaches.
Headphones and Muting: Both therapists and patients should use headphones and mute their microphones when not speaking to prevent eavesdropping and distractions.