Original Research Article

Dance Wherever You Are: The Evolution of Multimodal Delivery for Social Inclusion of Rural Older Adults

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Abstract

Background and Objectives: Older adult social inclusion involves meaningful participation that is increasingly mediated by information communication technology and in rural areas requires an understanding of older adults' experiences in the context of the digital divide. This article examines how the multimodal streaming (live, prerecorded, blended in-person) of the Sharing Dance Older Adults program developed by Canada's National Ballet School and Baycrest influenced social inclusion processes and outcomes in rural settings.

Research Design and Methods: Data were collected from on-site observations of dance sessions, research team reflections, focus groups, and interviews with older adult participants and their carers in pilot studies in the Peterborough region of Ontario and the Westman region of Manitoba, Canada (2017–2019). There were 289 participants including older adults, people living with dementia, family carers, long-term care staff, community facilitators, and volunteers. Analytic themes were framed in the context of rural older adult social exclusion.

Results: Remote delivery addressed barriers of physical distance by providing access to the arts-based program and enhancing opportunities for participation. Constraints were introduced by the use of technology in rural areas and mitigated by in-person facilitators and different streaming options. Meaningful engagement in dynamic interactions in the dance was achieved by involving local staff and volunteers in facilitation of and feedback on the program and its delivery. Different streaming technologies influenced social inclusion in different ways: live-stream enhanced connectedness, but constrained technical challenges; prerecorded was reliable, but less social; blended delivery provided options, but personalization was unsustainable.

Discussion and Implications: Understanding different participants' experiences of different technologies will contribute to more effective remote delivery of arts-based programs with options to use technology in various contexts depending on individual and organizational capacities.

Translational Significance: This research demonstrates the complexity of digitalizing arts-based programs to enhance social inclusion for older adults, people living with dementia, and their carers in rural areas. Examining the evolution of multimodal streaming of Sharing Dance Older Adults reveals the importance of in-person facilitators and supporters in local contexts and how technology can both mitigate and exacerbate barriers to meaningful participation. These insights will inform more effective implementation of remote program and service delivery to growing populations of older adults in rural areas and thereby provide better access and more options for communities to engage and interact in more meaningful ways.

Social inclusion of older adults involves meaningful participation in social life that is shaped by diverse communities of people in relation to each other and their environments. In rural areas, such participation is increasingly mediated by information and communication technology (ICT). The importance of ICT has become particularly evident during the coronavirus disease 2019 (COVID-19) pandemic as organizations sought to make programs and services more accessible. Along with requirements for better digital infrastructure and literacy in rural areas, a deeper understanding of the influence of ICT delivery on program effectiveness is necessary to improve social inclusion of older adults and people living with dementia. This article contributes to this understanding by examining the remote delivery of the Sharing Dance Older Adults program, created by Canada's National Ballet School (NBS) and Baycrest to make dance accessible to older adults with a range of physical and cognitive abilities. The program expanded across Canada and into rural areas via ICT and was evaluated for its potential to enhance social inclusion during a 4-year, arts-based, collaborative research project. Drawing on a conceptual framework by Walsh, O'Shea, and Scharf (2012) and Walsh et al. (2020), social inclusion is a dynamic process that arises within the context of multidimensional and multilayered influences. Situated in the field of rural gerontology that seeks a critical understanding of the complex dimensions of aging in rural settings (Skinner et al., 2021), this work is informed by rural gerontechnology scholarship that acknowledges diverse older adult perspectives of and contributions to their communities and technology development (Kosurko et al., 2021). In this article, we focus on how the Sharing Dance program was adapted and evolved through multiple delivery modes in response to the experiences of program participants and stakeholders, including older people living with dementia and their carers.

Background and Objectives

In the context of contemporary rural aging studies and the nascent field of rural gerontology (Skinner et al., 2021), the research and development of programs and technology for older adult social inclusion requires critical investigation into how complex processes, outcomes, and experiences of aging and rurality are interrelated. Understanding rural dimensions of aging involves examination of how diverse experiences are negotiated and facilitated in rural places, where macrolevel features such as population demographics and geographical distance can influence microlevel, local interactions and relations (Skinner & Winterton, 2018). Amidst international interest in social exclusion and inclusion, key issues of social isolation and loneliness have been identified concerning quality of life for rural older adults. This has led to increased qualitative research approaches and conceptual models that reflect interrelational, multilevel dimensions and sociospacial relationships (Keating & Phillips, 2008; Walsh et al., 2017, p. 20; Winterton et al., 2016). Research that addresses well-being, social inclusion, and community connectedness must reflect these contextual factors, with attention paid to health aspects that exacerbate the potential for disconnectedness such as living with dementia (Hennessey & Innes, 2020). As older adults interact with multiple systems and services, the effective development of gerontechnology (such as ICT to address social inclusion) necessitates an understanding of multiple stakeholders' needs and agendas, including older adults themselves as well as their carers, service providers, and policymakers (Sixsmith et al., 2017). Rural research into gerontechnology that addresses social inclusion should consider the diverse perspectives of all of these stakeholders in unique rural contexts.

From Exclusion to Inclusion: Conceptual Frameworks and Contextual Approaches

Aging populations and experiences have been studied increasingly in rural contexts in the last few decades due to changing demographics and growing emphasis on cultural and experiential dimensions of rural social groups. Out-migration of younger, working-age people in tandem with in-migration of older retirees is highlighted as contributing to this complex, rural demographic imperative (Heley & Woods, 2021; Keating, 2008; Milbourne, 2012; Skinner et al., 2021). Milbourne's (2012) special edition on *Growing old in rural places* drew attention to both older people in rural studies and the rural dimensions of aging in gerontology, acknowledging the complex influences of the

growing proportion of older populations on experiences of aging within local contexts of communities. Problems associated with increasing costs of living in tandem with weakening rural economies, declining public services, social exclusion, and reduced human contact leading to loneliness were noted as significant developments of concern in advanced countries (Milbourne, 2012). In that volume, Walsh, O'Shea, Scharf, and Murray (2012) shared findings from a multiregional study in Ireland that demonstrated how economic and social changes affected some dimensions of rural older peoples' lives, while other dimensions were more associated with individual capacities and life course trajectories. From this work, a conceptual framework for rural older adult social exclusion was developed (Walsh, O'Shea, & Scharf, 2012) as a multiscale, relational construct, wherein mediating forces influence the potential for social exclusion in interconnected domains (Walsh et al., 2020). In the context of technology and inclusion, Burholt and Dobbs (2012) raised the issue of future digital exclusion for rural older adults in Europe. They recommended a social gerontological approach to study older adults' use of ICT in rural areas and to consider uses such as participation in hobbies and social relationships as well as the more dominant biomedical health care services. They stressed the importance of collaborative research to ensure that technological advancements are suitable for rural older people and that they do not replace the human-to-human interface. In line with this recommendation, our study is a collaborative, arts-based approach that draws on Walsh et al. (2020) conceptualization of rural older adult social exclusion to consider ICT as a mediating force with the potential to enhance opportunities for social inclusion by addressing physical and digital barriers in interlinked domains such as transportation and mobility, access to digital resources, services and programs, and enhancing meaningful interpersonal social relations.

ICT as a Mediating Force to Enhance Social Inclusion

ICT has the potential to both enhance and restrict social inclusion, and understanding its effectiveness from the perspective of rural older adults can contribute to strategies for its effective implementation and expansion. Many studies acknowledge the potential for ICT to connect older people in their communities (Kilapäinen & Seppänen, 2014; O'Connell et al., 2018; Warburton et al., 2013), and the importance of ICT for accessing services and socialization to age well in place (Berg et al., 2017). Using ICT to improve participation in meaningful social relations can create new ways of thinking about health and well-being, and alternative sources of community engagement (Antonucci et al., 2017). However, concerns have been raised in the literature as to the strength of the evidence base in the use of ICT to enhance social inclusion; there is limited exploration of how digital programs and services can support social inclusion beyond providing opportunities for participation or addressing barriers in this regard (Chipps et al., 2017). The latter is particularly important, as some research suggests that ICT-based programs and services can also contribute to exclusion of older people and others, particularly those living in rural areas (Kilpeläinen & Seppänen, 2014; O'Connell et al., 2018; Salemink et al., 2017).

Previous research on digital technology in rural areas has focused on two main areas of connectivity and inclusion, revealing challenges at community (macro) and individual (micro) levels that comprise the double digital divide. On the one hand, a key macrolevel barrier in access is digital infrastructure inconsistencies that persist in rural areas. On the other hand, varying individual skills and familiarity with technology use have also hampered uptake and use of the technology (O'Connell et al., 2018; Salemink et al., 2017). Several microlevel barriers in access to ICT-based services and programs for older adults in rural areas have already been identified in the literature, such as individual attitudes toward ICT, low digital literacy, and a lack of training and support (Warburton et al., 2013) including informal carer support with digital literacy (Grigorovich, 2020). The technical and social elements involved in both the delivery and content of programs can present participants with significant learning challenges (Clement & Shade, 2000). To address macrolevel barriers in access to programs and services, calls have been made for better internet infrastructure (O'Shea, 2009; Salemink et al., 2017). The COVID-19 pandemic emphasized the digital divide and provided a reminder of the challenges of not only ICT access but the skills to use it. Older adults and carers in long-term care and other settings were "pushed" into using ICT across multiple areas of their life with a sense of urgency due to being cut off from social connections. This presented a myriad of challenges for multiple stakeholders in a variety of settings and processes. Researchers in the field as well as service providers and practitioners thus need to be aware that the use of ICT in addressing social needs is a complex process involving many actors (Gallistl et al., 2021). Many older adults require support to remain engaged in ICT environments and have concerns about complicated processes and undue burden that can lead to social isolation (Innovation, Science and Economic Development Canada, 2019). Understanding all stakeholders' use of the technology is an important part of addressing this issue (Seifert et al., 2021). ICT may improve social inclusion of older people in rural areas provided that the changing dynamics and circumstances of older people and their living environments are taken into consideration (Biniok et al., 2016), along with balancing the needs of both older people and service providers (Hodge et al., 2017). Infrastructure and education levels also need to be considered when implementing digital inclusion strategies (Park, 2017). Recommendations include built-in training infrastructure, interactive communication that includes feedback from users, cocreation opportunities (Van der Heide et al., 2012),

and recognition of social-support networks and third-party facilitators necessary for engagement (Hodge et al., 2017).

There is more work to be done to understand the increasing role ICT plays in addressing rural older adult social inclusion beyond providing opportunities to connect, such as through social and physical activities and supports (Berg et al., 2017), especially those that older people living with dementia and their carers want and need (Herron & Rosenberg, 2017). Deeper insights into how rural spaces facilitate technological infrastructure is important to develop effective strategies given the interplay of stakeholders, resources, and contexts that either constrain or facilitate inclusion (Scharf & Keating, 2012). Progress toward social inclusion may be made by taking active steps to both remove barriers and to facilitate improved participation in society and by enhancing opportunities for meaningful social interaction, access to resources, and participation (United Nations, 2016). We examine how the remote delivery of the Sharing Dance Older Adults program adapted through different modes to better support this kind of progress in addressing barriers to and facilitators of meaningful participation and interpersonal connections through remotely delivered dance.

Research Design and Methods

To examine the evolution of the multimodal delivery of the Sharing Dance Older Adults program, we draw on findings of our qualitative sequential pilot study (Skinner et al., 2018). Here our focus is on one objective of this study:

to assess the effectiveness of the multimodal delivery of the dance program as it relates to enhancing social inclusion processes and outcomes across the care continuum in urban and rural settings. Data in this article highlight participants' experiences of the program as it was delivered in live, prerecorded, and in-person blended steaming modes.

Collaborative Sequential Research Design

Data for this article were collected from 2017 to 2019, when the pilots of the 8-week dance program were delivered in community and long-term care settings in 12 rural and small-town settings (including two rural regional service centers) in two Canadian provinces: Ontario (Figure 1) and Manitoba (Figure 2). Distances of these sites from larger or urban population centers ranged from 16.8 to 99.9 km.

Each regional pilot followed a collaborative, sequential research design (Skinner et al., 2018) starting with one site in each province and then expanding to subsequent community and long-term care settings in three phases for a total of 12 sites across the two regions. We refer to each of these phases as P1, P2, P3 (in Peterborough) and B1, B2, B3 (in Brandon).

Pilot Program: Baycrest NBS Sharing Dance Older Adults

Sharing Dance Older Adults aims to make dance accessible to older people with a range of physical and cognitive abilities, including people living with dementia. Developed

Figure 1. Research sites in Peterborough, Ontario.

Figure 2. Research sites in Brandon, Manitoba.

by Canada's NBS and Baycrest, each dance within a class includes physical and artistic goals such as physical awareness and mobility, coordination, strength, confidence, eye focus, storytelling through movement and gesture, joy, and engagement with music (Herron et al., 2020; Kontos et al., 2021). Originally developed to be delivered in-person, the program was subsequently adapted for remote delivery. Through video streaming, dance sessions became available for participants in long-term care and community settings with on-site facilitators supporting participants. Facilitators with experience leading older adults in physical activity were identified locally for each site (in both community and long-term care settings; e.g., the recreation director or yoga instructor in the community setting or the recreational therapist in a long-term care setting) and supported the delivery of the program. Technology for the pilot study was provided where necessary by research partners and with community foundation funding that allowed for the purchase of large-screen smart TV monitors and laptops and signal boosters (rocket hubs) to enhance Wi-Fi connectivity. Installation and technical support were provided by the research partner and program provider. Technology infrastructure, connectivity, and skills varied in each setting. Examples of diverse setups included the use of a large drop-down screen with the projector connected to a laptop, a large-screen TV monitor mounted to the wall with a separate sound system and HDMI connection to a laptop connected via Wi-Fi to rocket hub, a large-screen TV monitor temporarily rolled in for each session connected to a laptop via Bluetooth and wired to a speaker.

Data Collection

Data for this article were collected over 10 weeks in each site through interviews, observations, focus groups, and research team reflections. Interviews were conducted prior to and after the eight weekly program sessions for insights into participants' characteristics and attitudes toward dance as well as personal reflections of their experiences with the dance program and how it was delivered. Observations focused on participants' embodied interactions and expressions during weekly sessions, recorded in field notes structured by a semistructured guide that developed from pilot to pilot. Field notes included reflective and descriptive accounts of settings and participants; details of activity sequences; interactions between participants, on-screen instructors (OSIs), and microenvironmental factors; and gestures, facial expressions, and conversations with participants and OSIs. In some sites, where all participants provided informed consent, video was recorded for later analysis to supplement in-situ field notes. Focus groups were held with participants, their carers, facilitators, administrators, staff, and volunteers at the end of the 8-week sessions for each site to provide deeper insights for use in and analysis of interviews. Semistructured interviews were conducted with participants, carers, facilitators, administrators, staff, and volunteers upon completion of the focus groups. For

some participants who were unable to remember participation in the dance program, postsession interviews were not conducted or were discontinued to avoid causing emotional distress.

Participants

With ethics approval from two Canadian Universities, participants were recruited in partnership with local Alzheimer Society support groups, Community Care Peterborough, and the Alzheimer Society of Canada Westman Region office in Brandon. The pilot program and research project were advertised in both regions using local radio and newspaper channels along with word of mouth and referrals by the partner agency support groups. As the pilot studies expanded, returning participants recommended the program to others who joined sessions in the community settings. In institutional settings, recreation directors promoted the program internally to residents and their carers and purposively selected participants whom they deemed appropriate. Research participants included older people, people living with dementia, and family carers (ranging from 66 to 96 years old); administrators and staff in both community and institutional settings; facilitators and volunteers supporting participants. There were a total of 289 participants in the three phases in both regions.

Data Analysis

The qualitative data analysis of transcriptions of the interviews and focus groups, as well as field notes, was analyzed concurrently and recursively using standard thematic analysis techniques (Braun & Clarke, 2006). Text segments were assigned a descriptive code reflecting the original statement, which served as the basis for category formation. Through an inductive, iterative process, categories with similar content were investigated for interrelationships and then refined by moving from lower-order to higher-order themes as analysis progressed. Finally, analytical categories were examined with reference to the different dimensions of social inclusion in the rural older adult context as conceptualized by Walsh et al.'s (2019) including financial resources, social connections and resources, services, transport and mobility, safety, macroeconomic, place and community, individual capacity, and life course trajectories. In our findings below, we will illustrate how each mode of streaming (live, prerecorded, in-person blended) both addressed and created barriers to social inclusion in areas such as social connections and resources, services, transport and mobility, place and community, and individual capacity.

Results

The findings and discussion will illustrate the evolution of the multimodal program delivery as it adapted through live stream, prerecorded stream, and blended in-person stream modes in response to challenges and feedback from program participants including community administrators, older adults, people living with dementia, and family carers, volunteers, and staff facilitators.

Local Access to Meaningful Participation in a National Dance Program

To enhance access to dance for older people in rural areas who face cognitive and physical challenges, Canada's NBS adapted their Sharing Dance Older Adults program from in-person instruction to remote delivery by live stream. OSIs with a pianist demonstrated the dance sequences to a camera that broadcasted via internet the live-video stream for remote participants. Local community partners who signed up for the pilot study acknowledged how streaming the dance program provided them with better access to the program and allowed them to offer the resource that otherwise would not have been available:

> I thought it was a great thing to bring to a rural area—in my job I'm looking for resources and services and everything is in [the city] and I can't get speakers here or get programs here, so I thought this was great. (Community Center Administrator, Interview Notes)

Participants also expressed the significance of having the program available locally. "Being able to access this without having to drive [anywhere] is incredible" because having to travel to the nearest urban center in the winter, "takes hours out of your day to get there and back and park" (Community Participant, Interview). In another example below, a participant talked about how local access to the program helped them to get to know people in the community.

> Just getting to know people in the area. *[Interview prompt: Are you new to the area?]* No, I've lived here for many years, but because I live in the country I don't really know people. … I never really had a chance to be social with anyone around here. I thought this sounded interesting. I feel kind of isolated sometimes. I have to drive everywhere and [the local site] was nice and close so … I don't really go to [the city centre] because it seems silly to drive all that way to exercise and drive home. (Community Participant, Interview)

Proximity to the facility hosting the program was an important factor in addressing barriers to participation for older adults in rural areas. Further to increasing opportunities to connect with others, participants expressed how the local context made the participation more meaningful through "the music, the singing, the motions, the community … community is important to me, to have it where you know everybody" (Community Participant, Focus Group). These statements indicate that participants enjoyed not only the

music and movement provided by the program, but also being able to dance with people they know in their own communities, for a sense of community connectedness as described by a participant below:

> I like the physical, but I like the connectedness with people—the two together I think I can't separate them because I think if I was just doing the physical alone it would be like doing my physio, which I like, but it has none of the added benefits of this working towards a dance with a group of people whom you're interconnecting with every week and laughing with and having joy. … here we are grinning and laughing and that's huge in a rural community. If you're brought up with those values, you support local and to be able to support local through national ballet is just incredible. (Community Participant, Interview Transcript)

This person described how the experience was meaningful in terms of community connectedness shared physically and socially with fellow local participants. Another participant expressed how experiencing the program remotely helped them to think about dance in a new way in terms of mobility. "You can dance wherever you are, sitting down, and you can move and do things and have fun even if your mobility is somewhat limited." Another participant shared how their impression of their individual capacity to dance changed as a result of thinking of dance in a new way:

> Dancing to me, is getting up on the floor and hopping around, … but I wasn't disappointed because I was able to participate … the term dancing has changed a little bit in my mind because of it now. (Soft laughter) … learning that I can do something that I didn't think I could do. You just have to change a few rules and a few attitudes, that's all. I enjoyed each session that I attended more than the one before, because of my … impression … dancing … I didn't think I would be able to do it. (Long-term Care Resident Participant, Interview)

These quotes demonstrate how participating in the remote delivery of the Sharing Dance program changed the meaning of dancing for these individuals. Together this feedback demonstrates how remote access to dance mitigated barriers of location and transportation (i.e., not "having to drive") and physical mobility (in being able to "dance wherever you are") both in a geographical and embodied sense. Furthermore, by bringing individuals together in their communities and by improving attitudes about abilities to dance in different ways, the streaming of the program enhanced meaningful participation. Together these quotes demonstrate how the remote delivery of the program addressed social exclusion by providing more opportunities for meaningful participation in terms of community connectedness and individual capacity.

Facilitating Reciprocal Feedback Channels

While the use of remote delivery enhanced meaningful participation in rural areas, it also exacerbated constraints associated with the use of technology. Not being able to see their dance students, for example, NBS employed local facilitators to be their in-person "eyes and ears" in the room, to report to NBS via an online feedback form. Information relayed through the facilitator feedback channel allowed the dance teachers to better adjust the program according to participants' experiences. In one example, dance teachers responded to feedback by changing the choreography. One participant expressed appreciation for responses to their feedback:

> They got feedback about a difficult step and [then] it was gone and I was so glad because I couldn't do it and it was difficult and it affected my balance. (Community Participant, Focus Group)

From the facilitator perspective, being listened to into the feedback was a positive aspect of the remote delivery of the program:

> Another positive: During the program when I put feedback on the summaries, the people were very receptive [at NBS]. The word "modification" to be replaced with "option" for example, they were very receptive and changed the language. (Community Facilitator, Interview)

In addition to responding to feedback about the program, participants described how the facilitator feedback forms made it seem like there were "spies" relaying information to OSIs who would personal the dance classes with site-specific remarks and announce birthdays:

> Polka Dot slippers—when that was said, everyone broke up—little things that make it familiar—They have spies! It brought [the on-screen instructor] into the room. (Community Participant, Focus Group)
> I was impressed when [the on-screen instructor] mentioned names—that that came out on the screen—and when they said the birthdays and so on, which makes it very personal. (Carer Participant, Focus Group)

These participants indicated that response to their feedback created a personal connection to the instructors as if they were "in the room" and together with facilitators recognized the responsive nature of the program providers. Both participants and facilitators indicated that they felt their feedback was received and responded to. By giving their feedback through the facilitators, older adults contributed to developing the digitally delivered program remotely and reinforced the strength of the facilitator feedback approach. By using the facilitator feedback to respond to older adult preferences, NBS produced a sense of reciprocity in remote delivery of Sharing Dance that is

important to older adults for social connectedness via ICT (Waycott et al., 2019).

As the program expanded to more locations, the sustainability of maintaining this level of personalized connectivity for every participating group on a weekly basis became a challenge. By the end of the pilot study, during B3, a few facilitators expressed that they did not get a response to their input through the feedback channel. They indicated that "they never answered you back … within a couple of weeks it would be good to get a reply" (Community Facilitator, Interview). One explained that they "had to chase them down—they asked us for feedback … so it would be nice to have acknowledgment" (Long-term Care Facilitator, Interview). This is an important consideration for the sustainability of offering personalized connectedness as programs scale up and expand nationally.

Live-Versus Prerecorded Stream: Implications for Connectedness

The live-stream delivery of the program presented challenges with the technology due to poor internet connectivity and lack of comfort with technology on the user end. By the fourth week of P2, there were problems with the internet in at least one site each week and in the fourth week, three out of five locations could not fully participate in the live stream. In response, NBS adapted to a prerecorded stream, with an option to download the session in advance, as a short-term solution. Some participants expressed a preference for the live version based on a feeling of togetherness, as one describes below:

> Well I liked it best when they were live because I felt it was more personal. Just the feeling of them doing it at the same time as we were. (Community Participant, Interview)

While the live-stream option provided a feeling of connectedness for participants, technical difficulties caused anxiety for facilitators, and this was addressed by having the prerecorded option. Facilitators below describe their stressful experiences in managing the technology and how the prerecorded version alleviated this:

> [We] were panicking trying to get that first one running and it just wasn't happening. We looked at the server and it was just kicking us out. And we were like—okay, just throw the prerecorded [downloaded] one on. (Facilitator, Interview)

Facilitators also indicated that the technical difficulties distracted them from their role in connecting participants socially:

> That's what I liked with the prerecorded [version]. I didn't have the worry, and it enabled me to connect a bit better with the group from a social point of view. (Facilitator, Interview)

Reviewing both participants' and facilitators' experiences, comparing the prerecorded sessions to the live-stream experience revealed a trade-off in the connected feeling of dancing together for a more reliable program that they could participate in:

> And with the prerecorded, you still have all of the dance, it was just more that you weren't—you didn't have that feeling that we were all doing it together … I just felt that the prerecorded was more reliable. (Community Participant, Focus Group)

These quotes illustrate how preferences for the prerecorded delivery were based on the ease of use related to the reliability of the internet connection. This is an example of how the various delivery modes coterminously addressed and created barriers for those with limited infrastructure and varying comfort with technology in accessing the program. Exploring the development of the multimodal delivery highlighted how different uses of technology affected social inclusion in different ways in the rural context. The live stream enhanced a sense of connectedness for participants, while the prerecorded stream addressed facilitators' stressful experiences with the digital barriers of inconsistent infrastructure.

Hybrid Engagement in Blended Streaming and In-Person Delivery

The first Brandon/Westman Regional pilot study in Manitoba (B1) followed Peterborough's second pilot (P2) (Table 1), with blended delivery (in-person and video stream). A dance teacher who was trained in the Sharing Dance Older Adults protocols was placed in the room. As this was the first time the remote program was offered to people living with dementia, the teacher would be able to teach a live class if participants did not respond well to the video-streamed, on-screen instruction. In B1 and the previous pilot (P2), both the OSIs and the in-class facilitator were identified as an important part of the program and it was emphasized that the facilitator was also important for enhancing participation in the room, in addition to providing information to instructors at NBS. As one volunteer said during a focus group, "the two of them were a good combination."

> *Clark:* I think you really need a good demonstrator to, to encourage participating. *Researcher:* You mean, like someone in the room? *Clark:* Well, yeah. *Researcher:* Like besides the person. *Clark:* Like a person at the front and on the screen. *Researcher:* It's good to have both. *Clark:* Oh yes, much easier to follow … when there's a demonstrator. (Long-Term Care Participant, Focus Group)

To reinforce participant reflections that the facilitator was important for effective participation, researchers observed

Table 1. Evolution of Sharing Dance Older Adults Multimodal Delivery[a]

Pilot	P1	B1	P2	P3	B2	B3
Live-stream, with an in-person facilitator	X					
Blended (video stream with dance teacher), feedback channel		X				
Live-stream, with facilitator, feedback channel			X			
Prerecorded download (back-up) with in-person facilitator, feedback channel, online training module			X	X		
Weekly prerecorded video stream with in-person facilitator, feedback channel, online training module				X	X	X

Note: P1, P2, P3 = Pilot phases in Peterborough; B1, B2, B3 = Pilot phases in Brandon.
[a]The development of modes was not linear. Some modes were piloted at the same time.

that when no facilitator was in the room, "it was difficult to capture interactions because without a facilitator present, there was so much less interaction" (Team Reflection Notes). This was reflected in field notes and noted in team discussions and emphasizes the importance of the local facilitator in engaging participants in the program and making connections in the room. The facilitator builds on the strength of the dance program that allows it to be delivered remotely in how the instructor encourages participants to express themselves through movement using the space where they are and that there is no right or wrong way to dance (Kontos et al., 2021). As one participant explains below, the in-person facilitator augmented the encouragement of the instructor:

> Our facilitator worked really hard to get people going—… interacting with them, they would do the actions, smile and laugh with them—they know the residents a lot more personally … and had more of a connection with the residents … they try to include everybody and they know everybody so well and the residents respond to them more easily. (Long-Term Care Staff Participant, Interview)

This finding emphasizes how locally embedded facilitators with knowledge of and in relationship to local participants contributed to how the program was delivered in a personally connected way. From the facilitator's perspective, "it was a busy hour" to keep participants focused and engaged in the remote program using strategies including:

> A lot of eye contact, a lot of touch, let them know you're rooting for them—it was just engaging each one—it's easy for them to drift off—even when it's loud and there's lots of people, lots of them can't hear real well, so you know they can tune out … I was curious to see, to tell you the truth if, how they would respond via television, because I do exercise programs regularly—I was curious to see how technology would play a part—I thought it was great—I thought that some really latched on to the fact that it was via TV, but some still watched me—think there was a good mix of that. (Long-Term Care Staff Facilitator, Interview)

This description by a facilitator demonstrates the activities involved in engaging participants in the room locally.

Furthermore, it shows how a hybrid mix of in-person and technological delivery provided options for different preferences. In the rural context, this emphasizes the importance of employing local support to tailor the delivery of the program in achieving interpersonal connectedness.

In summary, each of the modes of remote delivery adapted in response to feedback from local contexts at various points during the study to contribute to its evolution. What became the multimodal, remote delivery of the Sharing Dance Older Adult program (weekly, prerecorded video stream of on-screen instruction together with a local facilitator supported by an online feedback channel) evolved over the course of the study in response to the challenges and experiences met in its countryside implementation (Table 1).

Discussion and Implications

Our findings support the notion that technology—in tandem with in-person interaction—can support remote delivery of programs for social inclusion. Assessing the multimodal delivery of the dance program revealed insights into experiences of rural older adults and communities and how different modes of delivery affected social inclusion differently for different program participants as it evolved. The remote delivery enabled local community access to the national dance program, but created challenges due to digital infrastructure and comfort levels with the technology. Adapting the program to a prerecorded video stream addressed barriers of internet connectivity and user anxiety for facilitators, but changed the sense of connectedness for participants in the interactive experience of the dance program. Social connectedness in weekly prerecorded sessions was enhanced through personalization for both individuals and groups, but the sustainability of this approach as the program expanded was a challenge. These findings together illustrate how rural older adults, along with facilitators, carers, and other stakeholders experience complex and interrelated dimensions of social inclusion in different ways when using different technologies. This is consistent with contemporary assertions that a one-size-fits-all approach to rural remote delivery will not work (Hennessey & Innes, 2020). Drawing on Walsh et al.'s (2019) conceptualization of rural older adult social exclusion in our analysis, we highlighted some, but not all, of

the interrelated domains and influences of social exclusion for rural older adults that could be addressed using ICT. For example, we demonstrated how streaming the Sharing Dance Older Adults program both mitigated and created barriers to social inclusion: by providing opportunities for social connections and resources while creating challenges in management of the technology and available infrastructure in rural places; by opening access to services previously rendered unavailable by transport and mobility; and by engaging people in place and within their community; and according to individual capacities monitored by facilitators. This framework was useful for demonstrating the relational nature of multilevel social inclusion and how both advantages and disadvantages can be created when addressing barriers to social inclusion.

Enhancing meaningful participation was achieved by engaging participants in dance locally, encouraged by local facilitators who monitored and mediated interactions with OSIs and participants in the room. The increasing involvement of local facilitators in the dance would necessitate both technical support and training, but feedback on and deeper understanding of how to support local facilitation is outside the scope of this project. Further inquiry into these mechanisms would also be useful in future examinations of effective remote delivery. Acknowledging that this research did not examine these questions, future exploration would be useful into how multimodal and hybrid programming may be effectively facilitated with options for prerecorded video content. Can prerecorded content be as effective as semi-real-time content? How might programs based on prerecorded content with in-person support be utilized to provide more social connectivity in remote communities?

Limitations of the research in the context of assessing the effectiveness of the multimodal delivery of the dance program included inconsistent technology in different settings; however, this became an important theme in the analysis that pointed to how different uses of technology either enhanced or restricted aspects of social inclusion or exclusion in different ways. For older adult participants living with dementia who were unable to remember their experiences in relation to how the program was delivered, there was a reliance on third-party reflections of carers, staff, and volunteers in responses to interview and focus group questions. This limitation may inform future research that emphasizes observable interactions and use of video capture to enable repetitive review and analysis. Not all participants experienced every available mode of delivery and not all who were observed were recorded by video or interviewed. Not all sites provided consent for video capture of sessions that resulted in some sites receiving a closer examination of interactions afforded by being able to revisit and review data repeatedly.

Governments, funding bodies, institutions, and organizations should collaborate to incentivize at multipolicy levels the remote delivery and program development that increases access to the experience of the arts and social engagement for multistakeholder players and supports, including staff, volunteers, carers, and diverse community members. As pointed out by Walsh, O'Shea, Scharf, and Murray (2012), the government has a role in this, but communities can take the lead in strategizing to promote cohesion and connectivity—exemplified in this context by identifying local facilitators to provide feedback and enhance participation in remote programs that are unavailable locally. Our recommendations are to provide more roles for arts-based practitioners and community members as in-person facilitators to better enhance participation in digital delivery of recreation and other programs, with access to appropriate training, technology, and technical skills. This aligns with recommendations that call for built-in training infrastructure, interactive communication that includes feedback from users, and cocreation opportunities (Van der Heide et al., 2012). Future research should explore further the differences between different modes of delivery to provide more options for multiple participants with varying levels of capacity, abilities, and resources in unique rural contexts, including microlevel interactions. Interactive ICT initiatives will be effective in engaging meaningful social engagement when they can be responsive and adaptive to unique contexts by incorporating feedback channels, training and support for local facilitation; participation with different stakeholders; and adequate devices and internet (Gallistl et al., 2021; Hennesy & Innes, 2020; Van der Heide et al., 2012). In light of the COVID-19 pandemic and the rush to digital solutions, and as communities consider whether internet access should be a basic human right, careful consideration should be taken as to the necessary skills development and support required for diverse stakeholders, alongside the provision of infrastructure and devices (Seifert et al., 2021). Attention must be focused on mitigating the potential to further isolate older adults who cannot access this type of technology along with the provision of hybrid digital and in-person delivery options. How might increased digitalization of programs and services widen the digital divide and how might that affect who is targeted and best supported by ICT interventions?

Conclusion

This article captured the evolution of a pre-COVID-19 implementation of an ICT-delivered, arts-based program to enhance social inclusion for older adults in rural areas, including people living with dementia and their carers. We set out to explore how the multimodal delivery of an arts-based program influenced social inclusion of rural older adults, people living with dementia, and their carers by breaking down barriers to accessible dance with outcomes enhancing meaningful interpersonal connections.

Our findings emphasize how embedding locally based facilitators and feedback channels allowed the remote communication of information to the program provider, created a sense of reciprocity in making requested changes

to the program, and provided a way of enhancing meaningful participation in the remotely delivered program, its delivery, and how it developed through different streaming modes. Understanding how different modes of technology influenced the experiences of different participants and facilitators will contribute to more effective remote delivery of arts-based programs with options to use technology in various contexts depending on individual and organizational capacities.

Our analysis demonstrated how ICT can contribute to meaningful engagement in programs, beyond simply providing opportunities to connect, by engaging local actors in the remote collaboration of the dance and by getting communities dancing together wherever they are. In the rural context, dance is not simply delivered remotely to older adults as end-users, but is cocreated in meaningful engagement and collaboration with diverse members of communities.

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Conflict of Interest

None declared.

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Author Contributions

A. Kosurko: Investigation, data curation, formal analysis, visualization, writing—original draft preparation; R. V. Herron: Conceptualization, methodology, funding acquisition, project administration, supervision, resources, investigation, formal analysis, writing—review and editing; A. Grigorovich: Writing—review and editing; R. J. Bar: Investigation, resources, data curation, formal analysis, writing—review and editing; P. Kontos: Conceptualization, methodology, formal analysis, writing—review and editing; V. Menec: Conceptualization, methodology, formal analysis, writing—review and editing; M. W. Skinner: Conceptualization, methodology, funding acquisition, project administration, supervision, resources, investigation, formal analysis, writing—review and editing.

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