Original Qualitative Research Report

The Perspective of Nurses and Healthcare Providers on the use of Television Videos with People with Moderate to Severe Dementia

Canadian Journal of Nursing Research
2024, Vol. 56(1) 49–60
© The Author(s) 2023

Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/08445621231208220
journals.sagepub.com/home/cjn

Lillian Hung[1], Karen Lok Yi Wong[1], Jim Mann[2], Annette Berndt[2], Lily Wong[2], Carly Wang[1], Deborah Liao[1], Diane Pan[1] and Haopu Ren[1]

Abstract

Background: Nurses and healthcare providers need practical tools to deliver person-centred care in hospitals and long-term care homes. Few non-pharmacological interventions are designed to meet the needs of people with moderate to severe dementia. Dementia-friendly television videos (TV videos) offer a familiar stimulation with the potential for meaningful engagement in the relational space of technology. TV videos refer to moving visuals with audio that can be shown on TV and other devices. They can be used for different purposes for people with dementia, such as stimulating memories and facilitating expressions.

Purpose: This study aims to understand the perspectives of nurses and healthcare providers on the potential function and practice considerations of using TV videos for people with moderate to severe dementia.

Methods: We conducted five focus groups with 23 nurses and healthcare providers in a long-term care home and a geriatric hospital unit. Data were analyzed using reflexive thematic analysis and guided by Kitwood's person-centred care model.

Results: Our analysis identified five themes about the use of TV videos: (1) calm the person with dementia who is in emotional distress, (2) form connections with the person with dementia, (3) bring people with dementia together, (4) facilitate the Person's Activities of Daily Living (ADLs), (5) help the person connect with their past.

Conclusion: TV videos should be designed to match the person's cognitive abilities, interests, and cultural and linguistic backgrounds. Our findings supplemented Kitwood's model by identifying the person's cultural and language needs.

Keywords

Technology, dementia, television videos, long-term care, geriatric hospital

Introduction

Technology is becoming increasingly prevalent in the work of nurses and the healthcare environment. People with moderate to severe dementia in geriatric care settings are at risk of sensory deprivation, loneliness, and social isolation (Smith et al., 2022; Wong et al., 2022). Virtual image technologies can potentially provide social and psychological support to this population (Fang et al., 2022). Television (TV) videos are one type of these technologies.

The use of TV videos with people with dementia in care settings in dementia care research began in the late 1980s and early 1990s (Hall & Hare, 1997; Werner et al., 2000). Some literature in the 1990s and early 2000s on dementia care was against using TV videos as an intervention with people with dementia in care settings, as TV videos were considered to have several problems. For example, Cohen-Mansfield and colleagues (1990, 1997) raised that watching TV videos could cause a person with dementia to be distracted and confused, and thus, the person could have verbally responsive behaviours because TV videos were external and unimportant stimuli to

[1]IDEA Lab, The University of British Columbia, Canada
[2]Community Engagement Advisory Network, Vancouver Coastal Health, Canada

Corresponding Author:
Karen Lok Yi Wong, 2211 Wesbrook Mall Room 259, Vancouver, BC V6 T 1Z7, Canada.
Email: klywong1@mail.ubc.ca

the person. Tappen (1997) and Zgola (1999) suggested that the functions of the person with dementia in a long-term care home environment would not improve by watching TV videos that were mostly unsuitable to the person. However, TV videos have recently been found to facilitate the self-expression of people with dementia and their interactions with healthcare providers (Bjørnskov et al., 2020; Breckenridge et al., 2021; Francis et al., 2020). They were also found to reduce agitation (Francis et al., 2020) and improve the mental health of people with dementia (de Medeiros et al., 2009). This positive change is likely due to advancements in TV video technology, which have improved the visuals and audio content, providing suitable experiences to the audience. The availability of dementia-friendly TV videos, specifically designed for people with dementia, may also play a role in these positive outcomes.

Dementia-friendly TV is a growing field aiming to develop TV videos tailored to the specific needs of people with dementia (Wong & Hung, 2023; Wong et al., 2023). (An example of a dementia-friendly TV video is at this link: https://watch.zinniatv.com/videos/dog-friends). These TV videos are intended to provide guided engagement opportunities between caregivers and those receiving care and foster reminiscence. The videos are designed to match the cognitive abilities of people with dementia. For example, due to dementia, people with dementia may have a shortened attention span and can no longer process the video and audio pacing of regular TV videos or follow complex content. Therefore, dementia-friendly TV videos tend to be shorter (e.g., 5 to 10 min), at a slower pace, and have less complex content. Also, because of dementia, people with dementia may be more likely to be emotionally triggered. Thus, the topics of dementia-friendly videos tend to be comforting (e.g., nature, animals, festivals, travelling, hobbies, and interactive games). TV videos are called "TV" because they are played mainly via TV. However, with technological improvement, these videos can be played on other devices, such as tablets. Compared to other virtual technologies, virtual or augmented reality, TV videos are more familiar, easier to use, and lower cost.

Since people with moderate to severe dementia may be unable to use TV videos due to their disabilities, nurses and other healthcare providers working with this population play a vital role in supporting them. However, there is limited literature available regarding the opinions of healthcare providers on the potential functions and practice considerations for utilizing these videos. Integrating technology within a clinical setting can be complex (Langhan et al., 2015; Schecter & Dougherty, 2009; Vest, 2010). Thus, it is essential to consider the perspectives and experiences of healthcare providers regarding using such technology. The scant literature offers practice considerations for using TV videos with people with dementia, such as tailoring the content to match their interests, life experiences, cognitive abilities, and familiarity (Bjørnskov et al., 2020; Wong et al., 2023). Additionally, providing healthcare providers with adequate education and resources, including devices, for effectively utilizing these videos is emphasized (Lundström et al., 2021).

Building more understanding of a technology designed for people with moderate to severe dementia is essential from an equity perspective (Baumann & Cabassa, 2020; Evans et al., 2021; Hedman et al., 2018; Morhardt et al., 2015). In dementia and technology, equity refers to people with diverse cognitive abilities accessing technologies (Linggonegoro & Torous, 2020). Technology support for people with moderate to severe dementia, a vulnerable group that needs the support the most, is an area that requires exploration.

Person-centred care

Person-centred care is a philosophy and approach that prioritizes the unique needs, preferences, and abilities of people with dementia. Ensuring that the technology used in dementia care, such as TV videos, is appropriate for the person's cognitive abilities, promotes social interaction, and meets different needs is crucial. Kitwood's (1997) person-centred model outlines five psychosocial needs of people with dementia: comfort, attachment, inclusion, occupation, and identity. While Kitwood's model is widely recognized, it is important to consider the role of staff and organizational factors in dementia care (Edgar et al., 2020). A person-centred culture is essential for providing good care in dementia care settings (McCormack et al., 2018). The person-centred practice framework by McCormack and McCance (2017) offers relevant constructs and their relationships to understand the enablers and barriers to building a person-centred culture. They underscore achieving a person-centred culture through continuous interprofessional development with support provided for the healthcare providers. In addition, Mitchell and Agnelli (2015) and Terkelsen et al. (2020) have highlighted the importance of technology and cultural and linguistic backgrounds in person-centred care.

This paper reports the findings of a study that investigates nurses' and other healthcare providers' opinions on the potential functions and practice considerations of using TV videos designed for people with moderate to severe dementia in care settings. In this paper, healthcare providers refer to professionals who deliver healthcare to people with dementia (e.g., nurses, care aides, and allied health professionals). The study presented in this paper is part of broader research about using TV videos designed for people with moderate to severe dementia in care settings. The findings of this paper will inform the broader study for implementing and evaluating TV videos with this population. The study was approved by the Ethical Committee of the University of British Columbia.

Research questions

1. From nurses' and other healthcare providers' opinions, what could the TV videos be used for (i.e., the potential functions of TV videos) with people with moderate to severe dementia in care settings?

2. What are the necessary practice considerations when using TV videos?

To guide our analysis, we applied Kitwood's person-centred model of care, as TV videos can be considered a care practice that supports person-centred care. Kitwood's model (1997) was particularly suitable because it was developed from research specifically involving people with moderate to severe dementia, aligning with the focus of our study. Additionally, the person-centred practice framework by McCormack and McCance (2017) provides a deeper understanding of how a person-centred culture can be applied to innovative practice. TV videos can advance the relational components of person-centred care practice framework. For example, a healthcare provider can show TV videos to start conversations with a person with dementia to form a relationship. The person may reminisce about their past when watching TV videos. This helps the healthcare provider learn more about the person, enhancing their relationship.

Zinnia TV

Zinnia (2022) is a series of dementia-friendly TV videos designed specifically for people with moderate to severe dementia. They were already in existence when we started the study. These videos share similarities with other dementia-friendly TV videos. They are shorter (5 to 20 min), presented at a slower pace, and feature less complex content than regular TV videos. The topics covered in Zinnia TV videos are comforting and include subjects such as animals, nature, and interactive games. They can be accessed through various devices like tablets and smart TVs. The primary objective of Zinnia TV is to facilitate engagement between people with dementia and their caregivers while stimulating their memories. One distinctive feature of Zinnia TV videos is their inclusion of content supporting people with moderate to severe dementia in performing activities of daily living (ADLs), such as drinking water and washing their faces. These videos provide visual and audio cues, creating an appealing tone to help people with dementia perform ADLs and enhance their independence. Zinnia TV offers high-quality visuals and audio, providing a more immersive experience for the audience.

Methods

Patient and public involvement and research team

We applied the Patient and Public Involvement (PPI) approach in the project to ensure that patient and family partners played a significant role in shaping the research design, execution, and dissemination (Greenhalgh et al., 2019; Miah et al., 2019; Molinari-Ulate et al., 2022). PPI refers to research conducted "with" patient partners and the public rather than being done "to," "about," or "for" them. Our research team consisted of one patient partner (JM), two family partners (AB, LW), one academic researcher (LH), two healthcare providers (KW – social worker, DL - nurse), and two research trainees (CW, DP). Our team's patient and family partners had extensive experience collaborating with LH on other research projects. In this TV video project, they actively participated in various stages, including research preparation, study planning, shared decision-making on roles and responsibilities, data collection and analysis, co-authorship in conference presentations and publications, and serving as spokespersons in media communications. For example, patient partner JM and family partners AB and LW collaborated with healthcare provider KW and research trainees CW and DP to present the findings of this study at different conferences. Their valuable insights and perspectives ensured that the research was inclusive and reflected the needs and priorities of those with lived experiences.

Setting, participants, and recruitment

We studied in a long-term care home and a geriatric hospital unit in Vancouver, Canada. The geriatric hospital unit was multicultural, and patients and healthcare providers were from diverse cultural backgrounds. The long-term care home was ethnocultural. Most residents and healthcare providers came from diverse Asian cultural backgrounds. Patients in the geriatric hospital unit and residents in the long-term care home constantly changed. It was challenging for healthcare providers to tell the exact percentage of patients or residents with moderate to severe dementia. However, according to the clinical impression of healthcare providers of both sites, 70% or more of their patients or residents had moderate to severe dementia. Before the introduction of Zinnia TV, healthcare providers often used common videos on YouTube, which were not specifically designed for people with dementia (Funnell et al., 2019).

We introduced the study to each site by putting posters in clinical areas and elevators. The clinical educators helped us recruit a healthcare provider champion at each site, who helped with local participant recruitment. We applied purposive sampling to invite healthcare providers from diverse disciplines with experiences working with people with moderate to severe dementia. The champions sent posters and group emails to all healthcare providers to sign up for the focus group. Please see the demographics of participants in Table 1. We conducted five focus groups with 23 participants from four disciplines (Nursing, Recreation Therapy, Rehabilitation, and Administration) between March and May 2022. Each focus group had three to eight participants. Three focus groups, with 12 participants, were healthcare providers in the long-term care home. Two focus groups, with 11 participants, were healthcare providers in the geriatric hospital unit.

Data collection procedures

Patient and family partners actively participated in the collaborative planning for data collection. The research team engaged in discussions regarding the focus group format,

Table 1. Demographics of staff participants (n = 23).

Category	Sub-category	Number
Site	Long-term care home	12
	Geriatric hospital unit	11
Discipline	Nursing	12
	Recreation	7
	Rehabilitation	3
	Administration	1
Role	Nurse	6
	Care aide	6
	Recreation therapist/recreation team lead	2
	Recreation aide	5
	Physiotherapist	1
	Rehabilitation aide	2
	Administration clerk	1
Gender	Women	13
	Men	10
Age group	21–30	11
	31–40	5
	41–50	7
Years of work experience	5 years or less	11
	6 to 10 years	4
	11 to 15 years	2
	16 to 20 years	2
	21 years or above	4

relevant questions, strategies, and challenges of participant recruitment. Each team member provided input based on their expertise. Patient partner JM and family partners AB and LW contributed feedback for inclusivity and patient priorities. (For example, JM raised the importance of inviting healthcare providers from diverse disciplines instead of only Nursing, considering patients and residents need support not only from one but different disciplines, which AB and LW echoed. This feedback was reflected in healthcare provider participants' selection and demographic data.) KW (social worker) and DL (nurse) gave their professional practice experiences. LH (academic researcher) contributed academic and research experiences. Weekly research meetings were held to problem-solve and update progress to ensure effective teamwork. Two research trainees conducted the focus groups; one facilitated the discussion, while the other took notes. The focus groups were conducted in the nursing station at a time suggested by the healthcare provider champions. A focus group guide was adopted (See Appendix 1.) At the start of each focus group, participants were provided with an explanation of how the TV videos were tailored for people with moderate to severe dementia. This included information such as the videos being produced in high resolution, featuring a relaxed pace, shorter duration, and lacking complex storylines. Subsequently, participants were shown selected TV videos from various topics, such as nature, pets, and ADLs, sourced from Zinnia (2022). Each focus group lasted approximately 45 min. With the participant's consent, the focus groups were recorded and transcribed.

Data analysis

We adopted and adapted mixed inductive and deductive approaches to thematic analysis (Swain, 2018). Our analysis involves eight steps to complete a systematic process with patient and family partners as well as trainees:

1. Thematic analysis was performed using a mixed approach of inductive and deductive methods. LH provided a training workshop for the team.
2. KW and LH employed an inductive approach to openly code the data, supported by qualitative data analysis software NVivo. Codes and categories were compared during the coding process.
3. A deductive approach was utilized by comparing the codes and categories with the person-centred care model, which provided theoretical concepts to guide theme development.
4. A summary was prepared and organized into categories with data coded for large team analysis.
5. The team, including patient and family partners, conducted three analysis meetings between June and August 2022, each lasting about an hour. Each team member provided input based on their expertise and lived experiences.
6. The team engaged in an iterative process, constantly referring back and forth between the data, codes, categories, and concepts of person-centred care in the literature to finalize the themes. Examples of using inductive and deductive approaches can be found in Table 2.
7. Reflexivity was incorporated into the analysis process by recognizing the influence of researchers' backgrounds on their worldviews, reflecting on assumptions, considering the sociopolitical environment, and questioning each other's assumptions during team meetings, following Braun et al.'s (2019) reflexive approach.
8. The paper thoroughly documented and described the data collection and analysis processes to ensure the research process's quality, trustworthiness, and rigour. Transferability of the results was enhanced by including details about the study sites, such as geographical locations, cultural backgrounds of healthcare providers and patients or residents, and the percentage of people with dementia at the sites.

Results

We identified two main themes: the TV videos' potential functions and practice considerations. We identified five sub-themes under the first main theme: (1) calm the person with dementia who is in emotional distress, (2) form connections with the person with dementia, (3) bring people with dementia together, (4) facilitate the person's activities of daily living (ADLs), (5) help the person connect with their past, as well as three sub-themes under the second main theme:: a) pay

Table 2. An example of using the inductive and deductive approaches in data analysis.

Data	Code	Category	Theme
Quote 1: *It [video] helps calm them in anxiety.* Quote 2: *I think a possible use of video is remedying patient agitation.*	Reduce anxiety Reduce agitation	Reduce emotional distress	We considered "comfort" in Kitwood's model, so named the theme "*Calming the person with dementia who is in emotional distress.*"
Quote 1: *When it's the late stage, it's difficult. Sometimes, the patient gets aggressive. We use something that they can focus on easily. That is the first and foremost - to get connected with the patient. Because once you get connected, it's easier to interact with the patient. So, we are utilizing TV videos in some ways, watching them on iPad.* Quote 2: That's how they connect with you because they remember, "Oh, you're the one who put that show on for me or put that in my language so that I could understand."	Connect with people with dementia in agitation Connect with people with dementia by showing videos they like	Connect with people with dementia	We considered "attachment" (i.e., forming of specific bonds) in Kitwood's model, so we named the theme "Form Connections with the Person with Dementia."

attention to the person's cognitive abilities, b) match the TV videos with the person's interests and backgrounds, c) pay attention to the cultural and linguistic relevance of the TV videos to create a meaningful and relatable experience for the person with dementia.

Potential functions of TV videos

Calm the person with dementia who is in emotional distress. Participants discussed how TV videos could calm people with moderate to severe dementia when anxious, agitated, or frustrated. For example, a nurse in the geriatric hospital unit talked about how when patients were anxious, showing a relaxed-paced TV video with things the patients like could help them recall happy memories.

> It [video] helps calm their anxiety. It brings back happy memories if they have pets or like to travel or do sports. It just gives them something comforting to relate to. Then, we have something to talk about, a positive distraction to support emotions and feelings. (nurse 1, geriatric hospital unit)

Another nurse in the geriatric hospital unit added that TV videos could reduce the person's stress by helping them relax and ease sadness.

> I think a possible use of video is remedying patient agitation. Spending a short moment to watch something with a person together can ease the symptoms of anger and sadness. (nurse 2, geriatric hospital)

Form connections with the person with dementia. Participants forwarded how TV videos could be used to form connections with people with moderate to severe dementia. For instance, a nurse in the geriatric hospital unit mentioned when a patient showed hitting behaviours and verbal shouting, it was essential to connect with the patient. Showing TV videos is one way to facilitate this connection.

> The early stages of dementia are easier. When it's the late stage, it's difficult. Sometimes, the patient gets aggressive. We use something that they can focus on easily. That is the first and foremost - to get connected with the patient. Because once you get connected, it's easier to interact with the patient. So, we are utilizing TV videos in some ways, watching them on iPad. (nurse 3, geriatric hospital)

Following what the nurse in the geriatric hospital unit above said, a recreation aide in the same unit added that a crucial point of using TV videos to build a connection with patients is to be aware that different patients have different interests because of their life histories.

> If he's into travel, you can let them watch the travel. Or if the person loves pets, then you can show pets. (recreation aide 1, geriatric hospital)

Another nurse added that the patients would remember the act of showing the TV videos of healthcare providers, and this positive experience could build rapport.

> That's how they connect with you because they remember, "Oh, you're the one who put that show on for me or put that in my language so that I could understand." There's that to help us to build the connection. The more tools we have, the better equipped we can build relationships. (nurse 4, geriatric hospital)

Bring people together. Participants discussed how TV videos could bring people with moderate dementia together in their

care settings. They suggested that people with dementia could watch the videos together, reducing their sense of loneliness and promoting their sense of togetherness. For example, a care aide in the long-term care home suggested bringing residents with the same interests to watch TV videos that matched their shared interests. She explained that this could reduce the sense of loneliness of residents as residents could have collective participation in an activity in which they had common interests.

> I believe we should gather people. This collective participation will alleviate loneliness. We should bring people together by their interests. (care aide 2, long-term care home)

Similarly, a recreation aide in the same long-term care home spoke about working with a group of immigrant residents with moderate dementia coming from the same city. He showed a TV video of a place in their home city that the residents were familiar with. When the residents watched the video, they talked to each other about the place. They also naturally moved to talk about other things, which showed that the conversation did not stop just because the residents finished talking about the place.

> When they see a familiar scene, they suddenly speak, like "I went there before…with so-and-so…." The group of older people who have gone there before will talk among themselves. As they spoke, they would begin to talk about other things. (recreation aide 2, long-term care home)

Facilitate the person's activities of daily living (ADLs). Some participants suggested that TV videos could facilitate ADLs for people with moderate to severe dementia. For instance, when asked what kind of TV videos they thought would be helpful to enhance the well-being of residents, a care aide in the long-term care home suggested that a video reminding residents to eat would be beneficial. She said that people with severe dementia needed cueing to eat, and the video could be this cue.

> If there is some film that can remind them, "Oh, for this food, you need to take it out, pick it up, and put it in your mouth." For those with dementia, it could be a simple action showing, "You bring the spoon up, open your mouth and then eat it like this. It activates their mind if there's a kind of video that reminds them to do things by showing each step." (care aide 3, long-term care home)

Help the person connect with their past. Participants talked about connecting people with moderate to severe dementia with their past using TV videos related to their past. For example, a recreation aide in the long-term care home knew that many residents were mothers and looked after their children when they were young, so she suggested playing TV videos about infants.

> A lot of the residents were mothers, so playing those infant videos may help them recall memories. (recreation aide 4, long-term care home)

Similarly, a recreation aide in the long-term care home shared that he showed a TV video about soccer to a resident, and this resident shared his interest in soccer in the past.

> In the past, I had an older person who seemed less responsive. To engage him, I played an old soccer game video. Surprisingly, he became more talkative, sharing stories about soccer stars he used to watch. It showed me that reminiscing about their past experiences and providing visual cues can be beneficial for some people with dementia. (recreation aide 3, long-term care home)

Practice considerations

Pay attention to the person's cognitive abilities. Participants raised that when using TV videos with people with dementia, healthcare providers should consider the people's cognitive abilities. For example, the recreation lead of the long-term care home talked about how, unlike residents with moderate dementia, residents with severe dementia could not benefit much from watching the TV video with other residents as their cognitive abilities impeded them from interacting with other residents. He suggested they would benefit more from watching the video one-on-one with a healthcare provider.

> Let's say the fourth floor (dementia unit) because that's more of a high-level dementia floor. It's hard to have a group experience because most of them don't interact with each other. Even if they tried, like, "I'm gonna tell you something, but I can't hear you." And vice versa. So it's kind of like not working, and it becomes a bit more like a one-on-one experience instead of a group experience. (recreation team lead, long-term care home)

Match the TV videos with the person's interests and backgrounds. Participants indicated that each person with dementia is different, and the content of the TV videos should suit their interests or relate to them. A nurse in a geriatric hospital unit proposed getting to know the interests of patients first and showing TV videos that match their interests accordingly.

> So it's like you have something like people and pets, exotic animals. So, knowing the patient first, knowing their history, what interests them, it depends on what kind of show we are going to show them on the TV. (nurse 5, geriatric hospital unit)

Similarly, a care aide in the long-term care home said that some residents like cooking and suggested showing cooking videos to these residents.

> Some residents like cooking … For the cooking programs, they can be there for a long time (care aide 4, long-term care home)

A care aide in the long-term care home suggested showing residents personalized TV videos, such as videos with

residents' families, so that the residents could relate to the videos when they were watching.

> We could play recordings of family members and gatherings, more personal videos that can't be shared with others. Such videos can include a son, a grandson, or a previous vacation that the residents participated in. (care aide 5, long-term care home)

A nurse in the geriatric hospital unit talked about how it is crucial to consider the patient's generation and show TV videos that match their generation.

> Like yeah, pictures, TV programs, music, things that they like to listen to, depending on what year they were born, years they grew up in (nurse 6, geriatric hospital)

Pay attention to the cultural and linguistic relevance of the TV videos. Participants raised the importance of culturally and linguistically relevant TV video content. For instance, as suggested, the long-term care home was ethnocultural, with residents from diverse Asian cultural backgrounds. A care aide at the care home suggested showing residents TV videos about Chinese festivals so those from Chinese backgrounds could recall the memories of celebrating these festivals.

> So when there are any holidays, we have a lot of pictures to remind them, "Oh, it's this season, "it's the Dragon Boat Festival," "season for eating Chinese rice dumplings." When it is the Mid-autumn Festival, they'll also say to me, "Have you eaten mooncakes yet?" (care aide 6, long-term care home)

Similarly, a recreation aide of the geriatric hospital unit, which was multicultural, mentioned a Cuban Spanish-speaking patient. When she worked with this patient, she showed music TV videos in Spanish so that this patient could understand and enjoy them.

> Our Cuban patient speaks Spanish. So the music video [we showed her] is in Spanish. We make sure this so that she can relax. (rehabilitation aide 1, geriatric hospital unit)

Discussion

Person-centred care model

Kitwood's (1997) person-centred model suggests five psychosocial needs of people with dementia: comfort, attachment, inclusion, occupation, and identity. Comfort includes the concepts of "relaxed pace" and "holding." "Relaxed pace" means slowing down and accommodating the abilities of people with dementia. "Holding" refers to providing them with a sense of safety and security. Participants talked about how TV videos could calm people with moderate to severe dementia when they were anxious, agitated, and frustrated (i.e., psychologically and possibly also physically in pain.) They tried to free them from the pain by bringing them happy memories and reducing their anger and sadness using the TV videos. They used TV videos which matched their interests. All these provided them with a sense of peacefulness, that was, a sense of safety and security. The second need is attachment, which refers to the "forming of specific bonds" (Kitwood, 1997, p. 82). The participants mentioned forming a connection, that was, a bond, with the person with moderate to severe dementia using TV videos. The third need is inclusion, which means "to be part of the group" and not be alone (Kitwood, 1997, p. 83). Participants raised having people with moderate dementia watch videos which matched their shared interests in a group, suggesting that this could reduce loneliness and facilitate socially engaged conversation. The fourth need is occupation, which means to "be involved in the process of life in a way that is personally significant, and which draws on a person's abilities and powers" (1997, p. 83). The participants proposed that using TV videos to facilitate the ADLs of people with moderate to severe dementia and being able to do ADLs was an example showing their abilities. Also, they suggested the importance of matching the cognitive abilities of people with moderate to severe dementia when showing TV videos. The final need is identity, meaning "know who one is" (Kitwood, 1997, p. 83). Kitwood (1997, p. 84) suggested that "how each constructs his or her identity is unique." This is similar to the participants' argument of paying attention to the different interests and backgrounds of each person with dementia.

One interesting thing is that participants mentioned the cultural and linguistic relevance of the TV videos. Having a cultural and linguistic connection is essential for a person with dementia. However, this was not mentioned as one of the psychosocial needs in Kitwood's model. One critique of Kitwood's model is that it was mainly studied with and primarily applied to Western English-speaking populations (Terkelsen et al., 2020). Researchers and practitioners might not be aware of the need for cultural and linguistic relevance unless they apply the model to populations of other cultures and languages. The findings of our study on cultural and linguistic relevance supplement the original five psychosocial needs of Kitwood's model. Attention to cultural and linguistic diversity is crucial for dementia practice in care settings (Small et al., 2015).

Kaufmann and Engel (2016) argued that Kitwood's person-centred model misses the need for "agency," the capacity to make decisions. A person has two types of agency. One type is the individual agency, in which a person makes decisions by themselves. Another type is the relational agency, which acknowledges how social relationships and interactions shape the person's decision-making. Although participants did not mention the word "agency" in the focus groups, some of their sharing alluded to the concept of "relational agency" (Boyle, 2014). Due to cognitive abilities, many people with moderate to severe dementia did

not have the capacity to choose what TV videos they wanted to watch by themselves. However, with the support of participants who understood their interests, abilities, backgrounds, and life histories, they could choose the TV videos they liked to watch. The participants built such understanding from their relationships and interactions with the people. For example, participants showed or suggested showing TV videos about animals, infants, and soccer, depending on the interests of the people with dementia they worked with.

The reminiscence method is related to the person-centred care model discourse, and an essential part of this method is to refer to the biography of the person with dementia to stimulate them to recall the past (Breckenridge et al., 2021; Rao et al., 2021; Saragih et al., 2022). Although the participants did not explicitly mention that they adopted or will adopt the reminiscence method in the implementation of TV videos, their sharing showed that they included or will include reminiscence as a part of their implementation. For instance, they showed or planned to show TV videos about the person's past roles as a mother, past interest in soccer, and a place they went to previously.

Person-centred practice and culture

From the sharing of participants, we can see that they appeared to have used or planned to use TV videos in a person-centred way, as their sharing resonated with many aspects of Kitwood's person-centred care model. However, we still need to evaluate whether they indeed and to what extent they use TV videos in a person-centred way and how this changes over time, which is a part of our larger study. Outcome measures such as the Person-centred Practice Inventory by Slater et al. (2017) may be helpful for us to do the evaluation. In future studies, we plan to evaluate using the Person-centred Practice Inventory.

The person-centred practice framework by McCormack and McCance (2017) suggests that the care setting should have a person-centred culture that supports person-centred practices, such as having organizational policies that encourage person-centred practices. For example, there are organizational policies to reserve time for healthcare providers to learn about the interests, abilities, backgrounds, and life histories of people with moderate to severe dementia so that they can support people with moderate to severe dementia to choose and watch TV videos they like. Future research should investigate the influence of the broader macro systems on person-centred culture and practice.

Structural and organizational challenges

Literature suggests that using technology in care settings is complex, and structural or organizational challenges could exist (Dyb et al., 2021; Langhan et al., 2015; Schecter & Dougherty, 2009; Vest, 2010). Examples of structural or organizational challenges include the technology being too complex for healthcare providers, a shortage of healthcare providers to implement the technology, and a lack of technological resources such as devices and Wi-Fi. Interestingly, when we asked the participants for their opinions on the practice considerations of using the TV videos, they did not mention any structural or organizational challenges. One possible reason was that compared with other technologies, participants perceived that TV videos were something familiar, relatively "low tech," and thus did not foresee any structural or organizational challenges in implementing them. However, as a part of our larger study, participants will use TV videos more often. They may see more structural or organizational challenges, and their views may change after implementing TV videos more often.

Reflecting on results in the context of the literature

In this study, participants reported that TV videos could help reduce anxiety, stress, and social isolation faced by people with moderate to severe dementia. Our findings are consistent with several studies which used visual and audio technologies with people with dementia, such as Computer Interactive Reminiscence and Conversation Aid (CIRCA) by Astell (2004) and simulated presence therapy (SPT) by Peak and Cheston (2002) and Hung et al. (2018). CIRCA contains a database of video clips, music, songs and photographs, which people with dementia and a caregiver can explore together. Simulated presence therapy (SPT) involves playing a recording of the caregiver. These studies reported reduced negative and increased positive emotions and social behaviour.

Literature suggested different benefits of using TV videos with people with dementia in care settings. Participants in our study also mentioned these benefits. However, they suggested benefits beyond the ones often mentioned in the literature. For example, the literature indicated that TV videos could facilitate self-expression and interaction between people with dementia and healthcare providers (Bjørnskov et al., 2020; Breckenridge et al., 2021; Francis et al., 2020). Participants talked about these benefits. However, they added that TV videos could even facilitate conversations among people with moderate dementia if they watched the TV videos in a group on topics they had common interests. Future research may further explore the benefits of using TV videos of people with dementia in care settings.

Literature in the 1990s and early 2000s was against using TV videos with people with dementia in care settings, but there has been a change in recent literature. Our participants were generally supportive of the use of TV videos. One explanation may be a change of generation. Table 1 shows that about half of our participants ($n = 11$, 48%) were below 30, and 70% ($n = 16$) were below 40. This younger generation might have a different viewpoint of TV videos from the generation of healthcare providers who worked in the 1990s and early 2000s. We did not find older participants more against using TV videos than other participants, but we

had fewer participants in older age groups (41 years old and above, $n = 7$, 30%). Future research may explore if there is a difference between generations of healthcare providers in their views on using TV videos. Another explanation may be that access to quality TV technologies such as smart TV and TV videos with quality visuals and audio has increased between the 1990s and now. Healthcare providers may now see more potential in TV videos to improve the quality of life of people with dementia in care settings.

Ethical considerations for using TV videos

Studies by Boger et al. (2017) and Hung et al. (2022) suggested that nurses and other healthcare providers need to use technologies with people with dementia ethically, that is, using technologies to benefit and not harm people with dementia. Nurses and other healthcare providers should consider about potential ethical issues when they use TV videos in everyday care for people with dementia. One example of ethical consideration is whether they have enough understanding of the interests and abilities of people with dementia to support them in selecting the TV videos. Another example is whether they have spent enough time interacting with people with dementia when the people are watching the videos. If nurses and other healthcare providers randomly pick videos which do not match the abilities and interests of people with dementia or leave them alone in front of the TV videos without interacting with them, it could be frustrating to people with dementia.

Involvement of patient and family partners

As suggested, patient and family partners were involved in all stages of this focus group study. They will also be involved in all stages of other phases of the larger study. The involvement of the patient and family partners is crucial to ensure the relevance and acceptance of the research. We followed the current practice considerations of PPI, which include four principles: (P1) involve the right people, (P2) involve enough people, (P3) involve people enough, and (P4) describe how it helps (National Health Service, 2023). To involve the right people (P1), we thoughtfully included patient and family partners who had direct and relevant experience with dementia care in hospital and long-term care settings. This ensured that their perspectives were aligned with the research focus. Involving people with diverse backgrounds and experiences, such as a patient partner and two family partners, allowed us to obtain a reasonable breadth and depth of views, ensuring that multiple perspectives were considered (P2 involving enough people). We integrated the perspectives of these patient and family partners into every stage of the research project, ranging from research planning to data collection and evaluation. Their input was instrumental in identifying research questions and outcome priorities, ensuring that the research was meaningful and relevant (P3 involving people enough). Throughout the process, patient and family partners actively participated in problem-solving during our weekly research meetings. They also supported data analysis and provided an intergenerational learning experience for the research trainees who were university students (P4 describing how their involvement helps). By involving patient and family partners, we ensured that the research was grounded in real-world experiences and had a higher likelihood of being accepted and implemented within dementia care settings.

Strengths and limitations of the study

One strength of this study is that it followed a patient-oriented research approach by including people with lived experiences in research. The involvement of people with lived experience (patient and family partners) in data analysis helped to ensure the study findings are relevant to people with dementia. Another strength is that it proposed that the psychosocial needs of Kitwood's person-centred model of care could be used as a practical guide to inform nurses and healthcare providers about using TV videos with people with moderate to severe dementia in care settings. For example, when using TV videos, the attachment element mentioned in the model reminds them that they need to use the videos to form connections with people with dementia instead of leaving the people in front of the videos alone. A limitation of this paper is that only healthcare providers participated in the focus groups. Future studies should include people with dementia in care settings to share their opinions. Indeed, this will be the plan for the next phase of the larger study of this paper.

We referred to the findings of this paper to inform our larger study. This paper was about the first phase of the larger study. The next phase will be about implementing the TV videos by healthcare providers. From the findings of this paper, we learned about the importance of matching the TV videos with the cultural and language needs of the patients and residents. Therefore, based on the findings, we will work closely with nurses and healthcare providers who implement the TV videos to explore their patients' and residents' cultural and language needs during the implementation phase. The last phase of the larger study is evaluating the TV videos, which will include post-implementation focus groups with healthcare providers to see if their views have changed from what they said in this paper.

Conclusion

There was a perception that TV watching was passive for people with dementia in the 1990s and early 2000s literature. However, TV watching is now more acceptable due to improvements in TV technology, such as better visual and audio quality and an increase in dementia-friendly TV videos, which expands the potential of TV videos in

dementia care. For example, Bjørnskov et al.'s (2020) study used dementia-friendly TV videos with quality visuals and audio to facilitate communication and interactions between residents and healthcare providers in a long-term care home.

The findings of our study also challenged the stance of earlier generations of dementia care experts who labelled TV videos as an altogether inappropriate activity for persons with dementia. The participants suggested that they recognized TV videos as useful to comfort a person with dementia who is in emotional distress, form connections with the person with dementia, bring people together, facilitate ADLs, and help the person connect with their past. They also suggested considering the person's cognitive abilities, interests, backgrounds, cultures, and languages when using TV videos.

Our study adds to the existing person-centred care approach by highlighting the importance of considering cultural and language needs. We also found that Kitwood's model can guide the use of TV videos in care settings for people with moderate to severe dementia. TV videos could potentially change practice in dementia care and drive further research on how TV videos can expand practice considerations in person-centred care.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Accelerate Fund under Mitacs [number IT27862].

Ethical approval

The study was approved by the Ethics Committee of the University of British Columbia.

ORCID iD

Karen Lok Yi Wong https://orcid.org/0000-0002-4079-9123

Supplemental material

Supplemental material for this article is available online.

References

Astell, A. (2004). Facilitating communication in dementia with multimedia technology. *Brain and Language*, *91*(1), 80–81. https://doi.org/10.1016/j.bandl.2004.06.043

Baumann, A. A., & Cabassa, L. J. (2020). Reframing implementation science to address inequities in healthcare delivery. *BMC Health Services Research*, *20*(1), 190. https://doi.org/10.1186/s12913-020-4975-3

Bjørnskov, S., Møller, J. A., & Gregersen, R. (2020). Usability of films designed for people with dementia in a nursing home setting. *Dementia (Basel, Switzerland)*, *19*(4), 1067–1085. https://doi.org/10.1177/1471301218794791

Boger, J., Jackson, P., Mulvenna, M., Sixsmith, J., Sixsmith, A., Mihailidis, A., Kontos, P., Miller Polgar, J., Grigorovich, A., & Martin, S. (2017). Principles for fostering the transdisciplinary development of assistive technologies. *Disability and Rehabilitation: Assistive Technology*, *12*(5), 480–490. https://doi.org/10.3109/17483107.2016.1151953

Boyle, G. (2014). Recognising the agency of people with dementia. *Disability & Society*, *29*(7), 1130–1144. https://doi.org/10.1080/09687599.2014.910108

Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2019). Thematic analysis. In P. Liamputtong (Ed.), *Handbook of research methods in health social sciences* (pp. 843–860). Springer Singapore. https://doi.org/10.1007/978-981-10-5251-4_103

Breckenridge, J. P., Kroll, T., Wylie, G., & Salzberg, A. (2021). Remembering the past, enhancing the present and sharing the future: A qualitative study of the impact of film screenings in care home communities. *Ageing and Society*, *41*(11), 2615–2640. https://doi.org/10.1017/S0144686X20000501

Cohen-Mansfield, J., & Werner, P. (1997). Management of verbally disruptive behaviors in nursing home residents. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, *52A*(6), M369–M377. https://doi.org/10.1093/gerona/52A.6.M369

Cohen-Mansfield, J., Werner, P., & Marx, M. S. (1990). Screaming in nursing home residents. *Journal of the American Geriatrics Society*, *38*(7), 785–792. https://doi.org/10.1111/j.1532-5415.1990.tb01470.x

de Medeiros, K., Beall, E., Vozzella, S., & Brandt, J. (2009). Television viewing and people with dementia living in long-term care. *Journal of Applied Gerontology*, *28*(5), 638–648. https://doi.org/10.1177/0733464808330964

Dyb, K., Berntsen, G. R., & Kvam, L. (2021). Adopt, adapt, or abandon technology-supported person-centred care initiatives: Healthcare providers' beliefs matter. *BMC Health Services Research*, *21*(1), 240. https://doi.org/10.1186/s12913-021-06262-1

Edgar, D., Wilson, V., & Moroney, T. (2020). Which is it, person-centred culture, practice or care? It matters. *International Practice Development Journal*, *10*(1), 1–17. https://doi.org/10.19043/ipdj.101.008

Evans, N., Boyd, H., Harris, N., Noonan, K., Ingram, T., Jarvis, A., Ridgers, J., & Cheston, R. (2021). The experience of using prompting technology from the perspective of people with dementia and their primary carers. *Aging & Mental Health*, *25*(8), 1433–1441. https://doi.org/10.1080/13607863.2020.1745145

Fang, M. L., Walker, M., Wong, K. L. Y., Sixsmith, J., Remund, L., & Sixsmith, A. (2022). Future of digital health and community care: Exploring intended positive impacts and unintended negative consequences of COVID-19. *Healthcare Management Forum*, *35*(5), 279–285. https://doi.org/10.1177/08404704221107362

Francis, E. R., Smith, J. G., Qayyum, M., Lee, J., Woodgate, P., & Lawrence, R. M. (2020). Biographical films as a person-centered approach to reduce neuropsychiatric symptoms of dementia in residential care: A feasibility study. *Journal of Clinical Psychology*, *76*(1), 137–145. https://doi.org/10.1002/jclp.22853

Funnell, L., Garriock, I., Shirley, B., & Williamson, T. (2019). Dementia-friendly design of television news broadcasts. *Journal of Enabling Technologies*, *13*(3), 137–149. https://doi.org/10.1108/JET-02-2018-0009

Greenhalgh, T., Hinton, L., Finlay, T., Macfarlane, A., Fahy, N., Clyde, B., & Chant, A. (2019). Frameworks for supporting patient and public involvement in research: Systematic review

and co-design pilot. *Health Expectations*, *22*(4), 785–801. https://doi.org/10.1111/hex.12888

Hall, L., & Hare, J. (1997). Video RespiteM for cognitively impaired persons in nursing homes. *American Journal of Alzheimer's Disease*, *12*(3), 117–121. https://doi.org/10.1177/153331759701200304

Hedman, A., Kottorp, A., & Nygård, L. (2018). Patterns of everyday technology use and activity involvement in mild cognitive impairment: A five-year follow-up study. *Aging & Mental Health*, *22*(5), 603–610. https://doi.org/10.1080/13607863.2017.1297361

Hung, L., Au-Yeung, A., Helmer, C., Ip, A., Elijah, L., Wilkins-Ho, M., & Chaudhury, H. (2018). Feasibility and acceptability of an iPad intervention to support dementia care in the hospital setting. *Contemporary Nurse*, *54*(4–5), 350–361. https://doi.org/10.1080/10376178.2018.1505436

Hung, L., Mann, J., Perry, J., Berndt, A., & Wong, J. (2022). Technological risks and ethical implications of using robots in long-term care. *Journal of Rehabilitation and Assistive Technologies Engineering*, *9*(101671667), 20556683221106917. Ovid MEDLINE(R) PubMed-not-MEDLINE <2022>. https://doi.org/10.1177/20556683221106917

Kaufmann, E. G., & Engel, S. A. (2016). Dementia and well-being: A conceptual framework based on Tom Kitwood's model of needs. *Dementia (Basel, Switzerland)*, *15*(4), 774–788. https://doi.org/10.1177/1471301214539690

Kitwood, T. (1997). *Dementia reconsidered: The person comes first*. Open University Press.

Langhan, M. L., Riera, A., Kurtz, J. C., Schaeffer, P., & Asnes, A. G. (2015). Implementation of newly adopted technology in acute care settings: A qualitative analysis of clinical staff. *Journal of Medical Engineering & Technology*, *39*(1), 44–53. https://doi.org/10.3109/03091902.2014.973618

Linggonegoro, D. W., & Torous, J. (2020). Expanding technology for engagement in dementia while ensuring equity, interoperability, and privacy. *International Psychogeriatrics*, *32*(8), 893–895. https://doi.org/10.1017/S1041610219001674

Lundström, A., Ghebremikael, S., & Fernaeus, Y. (2021). Co-watching 360-films in nursing homes. In C. Ardito, R. Lanzilotti, A. Malizia, H. Petrie, A. Piccinno, G. Desolda, & K. Inkpen (Eds.), *Human-computer interaction – INTERACT 2021* (Vol. 12932, pp. 502–521). Springer International Publishing. https://doi.org/10.1007/978-3-030-85623-6_30

McCormack, B., Dickson, C., Smith, T., Ford, H., Ludwig, S., Moyes, R., Lee, L., Adam, E., Paton, T., Lydon, B., & Spiller, J. (2018). It's a nice place, a nice place to be'. The story of a practice development programme to further develop person-centred cultures in palliative and end-of-life care. *International Practice Development Journal*, *8*(1), 1–23. https://doi.org/10.19043/ipdj81.002

McCormack, B., & McCance, T. (2017). *Person-centred practice in nursing and health care: Theory and practice* (1st ed.). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781444390506

Miah, J., Dawes, P., Edwards, S., Leroi, I., Starling, B., & Parsons, S. (2019). Patient and public involvement in dementia research in the European union: A scoping review. *BMC Geriatrics*, *19*(1), 220. https://doi.org/10.1186/s12877-019-1217-9

Mitchell, G., & Agnelli, J. (2015). Person-centred care for people with dementia: Kitwood reconsidered. *Nursing Standard*, *30*(7), 46. https://doi.org/10.7748/ns.30.7.46.s47

Molinari-Ulate, M., Woodcock, R., Smith, I., van der Roest, H. G., Franco-Martín, M. A., & Craven, M. P. (2022). Insights on conducting digital patient and public involvement in dementia research during the COVID-19 pandemic: Supporting the development of an "E-nabling digital co-production" framework. *Research Involvement and Engagement*, *8*(1), 33. https://doi.org/10.1186/s40900-022-00371-9

Morhardt, D., Weintraub, S., Khayum, B., Robinson, J., Medina, J., O'Hara, M., Mesulam, M., & Rogalski, E. J. (2015). The CARE pathway model for dementia. *Psychiatric Clinics of North America*, *38*(2), 333–352. https://doi.org/10.1016/j.psc.2015.01.005

National Health Service (2023). *Public involvement*. Health Research Authority. https://www.hra.nhs.uk/planning-and-improving-research/best-practice/public-involvement/

Peak, J. S., & Cheston, R. I. L. (2002). Using simulated presence therapy with people with dementia. *Aging & Mental Health*, *6*(1), 77–81. https://doi.org/10.1080/13607860120101095

Rao, C. B., Peatfield, J. C., McAdam, K. P., Nunn, A. J., & Georgieva, D. P. (2021). A focus on the reminiscence bump to personalize music playlists for dementia. *Journal of Multidisciplinary Healthcare*, *14*, 2195–2204. https://doi.org/10.2147/JMDH.S312725

Saragih, I. D., Tonapa, S. I., Yao, C.-T., Saragih, I. S., & Lee, B.-O. (2022). Effects of reminiscence therapy in people with dementia: A systematic review and meta-analysis. *Journal of Psychiatric and Mental Health Nursing*, *29*(6), 883–903. https://doi.org/10.1111/jpm.12830

Schecter, M., & Dougherty, D. (2009). Combating elder abuse through a lawyer/social worker collaborative team approach: JASA legal/social work elder abuse prevention program (LEAP). *Care Management Journals : Journal of Case Management ; The Journal of Long Term Home Health Care*, *10*(2), 71–76. https://doi.org/10.1891/1521-0987.10.2.71

Slater, P., McCance, T., & McCormack, B. (2017). The development and testing of the person-centred practice inventory – staff (PCPI-S). *International Journal for Quality in Health Care*, *29*(4), 541–547. https://doi.org/10.1093/intqhc/mzx066

Small, J., Chan, S. M., Drance, E., Globerman, J., Hulko, W., O'Connor, D., Perry, J., Stern, L., & Ho, L. (2015). Verbal and nonverbal indicators of quality of communication between care staff and residents in ethnoculturally and linguistically diverse long-term care settings. *Journal of Cross-Cultural Gerontology*, *30*(3), 285–304. https://doi.org/10.1007/s10823-015-9269-6

Smith, C. B., Wong, K. L. Y., To-Miles, F., Dunn, S., Gregorio, M., Wong, L., Tam, S., Huynh, P., & Hung, L. (2022). Exploring experiences of loneliness among Canadian long-term care residents during the COVID-19 pandemic: A qualitative study. *International Journal of Older People Nursing*. https://doi.org/10.1111/opn.12509

Swain, J. (2018). *A hybrid approach to thematic analysis in qualitative research: Using a practical example*. Sage Publications Ltd. https://doi.org/10.4135/9781526435477

Tappen, R. M. (1997). *Interventions for Alzheimer's disease: A caregiver's complete reference*. Health Profession Press. https://go.exlibris.link/58P3R9cG

Terkelsen, A. S., Petersen, J. V., & Kristensen, H. K. (2020). Mapping empirical experiences of Tom Kitwood's framework of person-centred care for persons with dementia in institutional settings. A scoping review. *Scandinavian Journal of Caring Sciences*, *34*(1), 6–22. https://doi.org/10.1111/scs.12709

Vest, J. R. (2010). More than just a question of technology: Factors related to hospitals' adoption and implementation of health information exchange. *International Journal of Medical Informatics*, *79*(12), 797–806. https://doi.org/10.1016/j.ijmedinf.2010.09.003

Werner, P., Cohen-Mansfield, J., Fischer, J., & Segal, G. (2000). Characterization of family-generated videotapes for the management of verbally disruptive behaviors. *Journal of Applied Gerontology*, *19*(1), 42–57. https://doi.org/10.1177/073346480001900103

Wong, K. L. Y., Bayani, M., Mann, J., Berndt, A., Wong, L., Wang, C., Pan, D., & Hung, L. (2023). Using videos and films with people with major cognitive disorder living in care settings: A scoping review. *Gerontechnology*, *22*(1), 1–13. https://doi.org/10.4017/gt.2023.22.1.823.04

Wong, K. L. Y., & Hung, L. (2023). Cultural adaptation in television technology for older adults with dementia in care settings. *Frontiers in Dementia*, *1*, 1098446. https://doi.org/10.3389/frdem.2022.1098446

Wong, K. L. Y., Smith, C., To-Miles, F., Dunn, S., Gregorio, M., Wong, L., Huynh, P., & Hung, L. (2022). Timely considerations of using the de jong gierveld loneliness scale with older adults living in long-term care homes: A critical reflection. *Journal of Long Term Care*, 163–172. https://doi.org/10.31389/jltc.141

Zgola, J. M. (1999). *Care that works: A relationship approach to persons with dementia*. Johns Hopkins University Press. https://go.exlibris.link/kCWXbF18

Zinnia, T. V. (2022). *Zinnia TV*. https://www.zinniatv.com/

Author Biographies

Lillian Hung is the Tier 2 Canada Research Chair in Senior Care. She is a registered nurse and clinical nurse specialist at Vancouver Coastal Health and an assistant professor in the School of Nursing at the University of British Columbia. Dr. Hung is also the founder of the HYPERLINK "https://idea.nursing.ubc.ca/"UBC IDEA lab and leads research on how the environment-including technology, physical design and social aspects-may impact the care experiences of persons with dementia. To innovate and improve dementia care, she uses various methods to find innovative solutions to address clinical problems in care facilities and acute hospitals.

Karen Lok Yi Wong is a PhD candidate at the School of Social Work at the University of British Columbia. She holds a master's in social work and a master's in social policy. She is also a registered social worker with clinical experiences in diverse settings related to older adults, such as community senior services centre, long-term care, and geriatric acute care. Her research interests include aging and technology, lived experiences of dementia, and aging and diversity in race, culture, and immigration status.

Jim Mann, diagnosed with Alzheimer's disease in 2007, is a researcher and advocate for which he received an honorary Doctor of Laws degree from the University of British Columbia in 2020. His focus is on using technology to benefit people with dementia, the meaningful and ethical engagement of people with dementia, and issues of stigma for people living with dementia. He is a published author, including publishing solely and with other researchers in respected academic journals, and is the "Jim" in the City of Vancouver's YouTube video, Jim's Story.

Annette Berndt is a family partner and a member of the Community Engagement Advisory Network at Vancouver Coastal Health. She is passionate about research for the improvement of dementia care. She has been supporting projects at the IDEA Lab of the University of British Columbia as well as other organizations, such as PARO Robot, Telepresence Robot, TV Study, and many more.

Lily Wong is a family partner and a member of the Community Engagement Advisory Network at the Vancouver Coastal Health. She is passionate about research for bringing positive impacts on older adults. She has been supporting projects at the IDEA Lab of the University of British Columbia, for example, the Overcoming Loneliness Project, TV Study, Co-Create VR Project, and many more. She is also an active volunteer supporting older adults in the community.

Carly Wang is a Bachelor of Nursing student at the University of British Columbia. She also holds a Bachelor of Science in Biochemistry with an Arts minor in Spanish. She has experience working in labs in academia and industry, volunteering in the hospital and long-term care.

Deborah Liao is a Registered Nurse in Long-Term Care who is passionate about delivering quality, person-centred care to all seniors. She holds a Bachelor of Nursing and a Master of Health Leadership and Policy Program in Seniors Care. She is also interested in applying technology in health care and hopes to work with health information systems one day.

Diane Pan is studying Bachelor of Science in Behavioural Neuroscience at the University of British Columbia. She is passionate about sustainability, health, and wellness and is excited to be involved in improving long-term care through technology.

Haopu Ren is a PhD student in Interdisciplinary Studies at the University of British Columbia. She holds a Master of Health Leadership and Policy in Seniors Care and a Bachelor of Science in Accounting and Finance (Honours). She is interested in studying how technological instruments shape the health outcomes and well-being of seniors with dementia and their families.