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#### RESEARCH ARTICLE



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# Playing remotely in times of crisis: A program to overcome social isolation

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#### Abstract

**Objectives:** This study aims to examine the feasibility of an intergenerational remote intervention program designed to promote the wellbeing and social connection of vulnerable older adults, mainly people with aphasia and dementia during the COVID-19 pandemic in the south of Brazil. Undergraduate students were guided to lead weekly sessions of clowning, storytelling, dancing, and cooking-related activities for 3 months (from November/2020 to February/2021).

**Method:** The mixed-method design of the study addresses the implementation and feasibility of the program. Data analysis considered both quantitative—number of individuals who accepted the invitation to participate, voluntary dropouts, attendance—and qualitative data—participative observation and thematic analysis of evaluative conversations. An inclusive group of 34 older adults with stroke-induced cognitive impairments, dementia and individuals without any neurological conditions enrolled in the program based on social and racial equity principles. Feasibility and acceptability were addressed in terms of recruitment, implementation, remote evaluation, delivery of remote intervention, adherence, and attendance. Activities and participants' perceptions are described.

**Results:** The initial period of the program achieved 83.7% of adherence and sustainability for additional 3 months. Preliminary results suggest feasibility and acceptability, considering formal and informal support in digital inclusion. Participatory observations describe that the structure of sessions and activities were well received. The analysis of participants' perceptions detects the thematic saliency of feelings of social connection and a sense of having learned with the group.

**Conclusions:** Preliminary results of this study demonstrate the feasibility and acceptability of the program, pointing to its potential mental health benefits.

#### KEYWORDS

acceptability, COVID-19 pandemic, feasibility, implementation, mental health, older adults living with cognitive impairments, remote interdisciplinary intervention

#### Key points

- Group-based remote playful activities and one-to-one interactions through video calls from undergraduate students to older adults living with cognitive impairments was feasible and well received by this population.
- Results indicate that the intervention was perceived as promoting a positive effect and social engagement during the pandemic in Brazil.
- Further, larger scale trials are needed to assess the potential of the program to improve communication and reduce depression and anxiety symptoms of older adults with cognitive impairments.

#### 1 | INTRODUCTION

Older adults (up to 60 years old) represent 15.7% of the Brazilian population and approximately 16% of Brazilian older adults have disabilities, which are more significant among older adults in social and economic vulnerability.<sup>1</sup> Brazil has the highest rates of stroke in Latin America and these rates are related to lower socioeconomic status.<sup>2,3</sup> There is sufficient evidence that dementia increases as life expectancy grows and that its prevalence is higher among older adults in poor socioeconomic conditions in Brazil.<sup>4,5</sup> Black, brown, and indigenous older adults face greater social and economic vulnerability and are more susceptible to unhealthy conditions, due to the lack of prevention and treatment of chronic diseases, and strokes.<sup>2-6</sup> They also have the highest burden and poorest mental health rates, particularly depressive symptoms.<sup>7</sup> In line with equity principles, which imply equallising the health outcomes of disadvantaged social groups, mental health must be promoted among the most vulnerable older adults in the country.<sup>3-8</sup>

Health promotion must be considered from the lens of intersectionality, recognizing that individual people and communities might live at the intersection of a variety of social determinants which lead to compounding marginalization—such as those along the lines of race, class, disability, and age—which exponentially complicate the experience of health in Brazil. Currently, as the COVID-19 pandemic ravages Brazil's population, the black, brown, and indigenous people are amongst the most vulnerable for COVID-19 because of several overlapping historic, economic, and structural oppressions.<sup>9</sup> Given these disparities, Brazilian initiatives for health promotion must address inequity and prepare future health professionals for collaboration efforts that seek to empower the social participation of disadvantaged populations. Thus, art-based interventions may play a promising role.<sup>10</sup>

The impact of the COVID-19 pandemic and the consequent physical distancing measures changed the routines of older adults with dementia and aphasia<sup>11-13</sup> including postponing and canceling group activities and care-related services.<sup>13,14</sup> Due to social isolation, this population has been dealing with loneliness—a world without hugs, conversations, and laughter.<sup>15</sup> Thus, the social and healthcare consequences of the pandemic on lifestyle changes have significantly worsened cognitive and functional status, reducing overall physical

activities,<sup>16</sup> increasing depression and anxiety, and impacting self-reported quality of life measures.<sup>13,17,18</sup>

The COVID-19 pandemic has accelerated the use of telehealth technology<sup>19</sup> and has highlighted the importance of digital inclusion. Digital inclusion is the capability of individuals or groups to benefit from using technology and the internet in their day-to-day lives. Those who lack this capability are considered "digitally excluded".<sup>20</sup> Among those who are currently most in need of the facilitated use of technology and access to remote mental health intervention are low-income older adults in Brazil. According to the literature, telehealth technology can reduce the impact of social isolation, avoid the reduction in quality of life of people with cognitive impairments and reduce loneliness.<sup>13,14,18</sup> Loneliness is considered one of the main potentially modifiable risk factors for dementia.<sup>21</sup> Rates of loneliness correlate with the number of diseases, as well as with the number of medications and depressive symptoms among older adults in Brazil. Additionally, loneliness is also associated with declines in motor function and systemic arterial hypertension in the Brazilian older adult population.<sup>22</sup> According to a study conducted with Brazilian older adults during the pandemic, individuals who reported interacting frequently outside home and individuals who felt that their virtual interactions were disconnected presented increased loneliness. Lonely Brazilian older adults could be at greater risk for COVID-19 because they would be less prone to comply with physical isolation recommendations. Therefore, healthcare providers should be aware of the importance of reducing feelings of loneliness through meaningful virtual interactions both for mental health reasons and as a preventive strategy that would facilitate the commitment to physical distancing during the pandemic.<sup>23</sup>

In view of the negative impact of social isolation on the lives of older adults, especially those living with cognitive impairments, and the importance of online tools to promote safe therapeutic options that may attenuate loneliness during the pandemic, we developed an intergenerational remote program called *Playful Living*. The program was designed to engage socially diverse groups of older adults with undergraduate students from areas of arts and health. This interdisciplinary community outreach project involved the collaboration of different Brazilian universities, and public health and social care sectors. The taskforce began during the COVID-19 pandemic with the purpose of promoting wellbeing and social interaction. Funding was obtained through the Atlantic Institute's Solidarity Grant which allowed the project to meet the needs for technological access, affordability, and digital ability to socially connect vulnerable older adults and promote their mental health. The current paper aims to investigate the feasibility and acceptability of this intervention as well as to describe its implementation.

#### 2 | METHODS

This was a concurrent mixed-method study designed to explore the feasibility and acceptability of the *Playful Living* program using both quantitative and qualitative methods. The study was approved by the institutions where the study and recruitment took place (CAAE number 30907820.4.0000.5334).

#### 2.1 | Participants

Participants were selected by convenience sampling. Eligibility criteria were broad and inclusive as need for social support was high. In-person cognitive and functional screening tests were not possible due to physical distancing recommendations. An active search was conducted to reach out to older adults with diverse ethnic backgrounds, including as many black, mixed race and indigenous populations as possible. The inclusion criteria for participants was: aged 60 years or older; low socioeconomic conditions; medical history of stroke or clinical diagnosis of dementia reported on the medical records of the Speech Therapy or Social Service Centre; individuals with no neurological diagnosis or functional complaints who expressed experiencing loneliness according to social service; individuals who live with a relative or who count on the help of a social educator who would commit to the provision of in-person technological support. Family members had to ensure that participants had sufficient attention and comprehension skills to give consent for participation, answer evaluations, and participate in live-stream group activities. Individuals were excluded if recent medical records reported advanced stages of dementia, predominantly comprehensive or mixed aphasia, or if the family-reported significant behavioral, attention and comprehension problems.

Ten stroke survivors living with expressive aphasia who were part of an in-person clowning community outreach program lead by the main investigator before the pandemic fitted the inclusion criteria and accepted direct invitation. The recruitment of additional participants took place with the help of Speech therapists from a university hospital and a public community healthcare center, and social service professionals from two public facilities that provide social care for older adults. These professionals knew potential participants and family members from previous consultations and were able to call to check on overall functionality with family members. The speech therapists and social assistants introduced the program to potential participants and their family carers and connected those who were interested with the research associate, who then obtained consent from participants and family carers.

## 2.2 | Ethical procedures

Potential participants and their family members were invited to give or refuse consent by ticking the appropriate box in a Google Forms document. Those who could read and had sufficient motor skills to tick the consent form did this independently, and those who were unable, did this with the help of their family member, once verbal or nonverbal consent to the family member were confirmed. In addition to providing access to the Google Form consent document link, the content of the document was read aloud by the researcher during a WhatsApp video call; thus, the researcher was also able to confirm understanding as well as verbal and nonverbal consents from potential participants. The consent document assured data privacy and informed that participants could withdraw at any time. It also allowed individuals to choose to participate in the study even if they or their family members did not accept undertaking formal evaluations. In this case, they would tick the option indicating the choice to only provide general data on their sociodemographic and clinical status, as well as data on their attendance to and acceptability of the intervention program. The consent document also ensured confidentiality regarding publications of the study on information shared through Zoom and WhatsApp, despite awareness of minor confidentiality break risks involving any use of virtual platforms. To ensure the ethical principle of secrecy and non-identification in the research data files, all participants were identified with the acronym P, followed by a number. The team ensured data security and privacy by keeping codes and names in separate excel documents and storing the documents that contained the data in a private device owned by the main researcher.

#### 2.3 | Remote interviews

Interactions were made through video calls using WhatsApp and Zoom—these virtual meeting platforms have shown to work well for group interventions involving family members of older adults with dementia in Brazil.<sup>24</sup> A sociodemographic and clinical questionnaire was used to collect information about all the participants included in the program. Family informants answered questions on age, gender, racial self-identification, socio-economic conditions, family support (especially if they lived with a relative), education, self- or family-reported health, and diagnosed comorbidities. Table 1 shows demographic and clinical data in absolute numbers and percentages.

Those who agreed to undertake formal evaluations were asked to answer questionnaires and assessments remotely. The Brazilian validated version of the Functional Assessment of Communication Skills for Adults (ASHA-FACS) developed by the American Speech-Language-Hearing Association<sup>25</sup> was used to assess functional

Description			Mean (SD)
Age (years)	60-70 years	10 (41.7%)	71.8 (±9.2)
	71-80 years	11 (45.8)	
	81-90 years	3 (12.5%)	
Declared gender	Female	14 (58.3%)	
	Male	10 (41.7%)	
Declared race	White	13 (54.2%)	
	Black	7 (29.2%)	
	Brown	3 (12.5%)	
	Indigenous	1 (4.1%)	
Education (years of study)	Illiterate	1 (4.2%)	7.8 (±3.2)
	1-4 years	7 (29.2%)	
	5-8 years	8 (33.3%)	
	9–11 years	8 (33.3%)	
Socioeconomic condition	Class D (2 to 4 minimum salaries)	10 (41.7%)	
	Class E (up to 2 minimum salaries)	14 (58.3%)	
Clinical history	No neurological disorder reported	4 (16.6%)	
	Dementia reported mild to moderate	5 (20.8%)	
	Stroke-induced expressive aphasia	13 (54.4%)	
	Stroke-induced cognitive complaints	2 (8.2%)	
Total		24 (100%)	

TABLE 1 Sociodemographic and clinical features of participants

communication. The short versions of the Geriatric Depression Scale<sup>26</sup> and the Geriatric Anxiety Inventory<sup>27</sup> validated for use in Brazil were used to screen for depression and anxiety disorders.

#### 3 **PROCEDURES**

## 3.1 | Implementing digital inclusion

Once admitted to the program, the three main elements of digital inclusion<sup>20</sup> were provided: (1) access—through the donation of technological devices; (2) affordability-through the donation of internet credits necessary to be online; and (3) digital ability-the offer of support to use technology. Participants received a tablet and 3 months of internet service, which were made available through the Atlantic Institute's Solidarity Grant. Undergraduate students provided remote support and family members committed to assisting participants. Two social care facilities committed to providing access to social educators, if needed, offering in-person digital support to those connected or in reach to these facilities. The first month demanded great attention to introduce participants to the virtual world and WhatsApp calls were used first because all participants were familiar with this tool. Gradual steps were taken to ensure the learning process and family members and social educators helped during one-to-one calls to then teach participants how to use the Zoom platform.

#### Intervention procedures 3.2

The Playful living program was first an in-person clowning outreach programme for older adults with aphasia. Due to the COVID-19 pandemic and considering the importance of online tools to promote safe complementary therapies, we developed an online interdisciplinary program. This new intervention included a variety of artrelated activities, not limited to clowning, because we intended to include new participants who never practiced this form of art and who were also new to the virtual setting. The proposed art-related activities were clowning, dancing, storytelling, and cooking. These activities are recommended in the literature for the populations who attended the program.<sup>28-32</sup> However, rather than focusing on one type of activity, our program followed a person-oriented community holistic approach. Multidimensional social interventions including art, cooking and WhatsApp group activities have been shown to promote the mental health of Brazilian older adults.<sup>33</sup>

The program involved the active and intense participation of six professors and two professionals, two graduate students and approximately 20 undergraduate students from the areas of Speech Language Therapy, Drama, Psychology, Dance, Gastronomy, Psychiatry and Public Health. The team developed a program that offered both one-to-one video calls and group interactions to increase person-centered interaction and build collaboration with family members and social educators. This mixed setting resembled real-life

social scenarios and provided a safe bond with the team members during group sessions.

# 3.3 | One-to-one regular video calls and WhatsApp groups

All participants were included in a WhatsApp group with fellow participants and the sub-team. Undergraduate students of the abovementioned areas were assigned to two participants with whom they were required to schedule at least one WhatsApp video call per person each week. Students met regularly with clinical instructors at a scheduled time via Zoom to discuss participants' responses. Students were free to communicate with the clinical instructors by email or phone if any problems arose.

#### 3.4 | Playful live-stream sessions in group

The live-stream sessions engaged a fixed intergenerational group of peers. Four health professionals served as the preceptors of subgroups (A, B, C, and D), each was composed of around five students of various areas and seven or eight older adults. These four subgroups worked concomitantly under the themes proposed for each month (communication, memory, and imagination) and were autonomous to propose artistic activities according to their expertise (dancing, clowning, storytelling, and cooking) for 3 months.

Sessions were delivered through the Zoom platform once a week for 60 min. Sessions were planned to provide a predictable set of activities that would become familiar to the participants. These activities focused on meaningful and pleasurable communication situations to promote social interaction and empowerment in an inclusive way. Each student was responsible for keeping in touch with the participants, calling them regularly, sending reminders of the group session, and helping them with any technological problems or clarifications during group sessions. Participants also received inperson support from a family member or in some cases from a social educator. All groups had at least one professional or graduate student who was the Zoom host and stepped in as a facilitator whenever needed. The undergraduate and graduate students were assigned to participate in the same group but would also visit the other groups to propose activities. Figure 1 shows the roles played by the team members and participants.

#### 4 | DATA ANALYSIS

Feasibility and acceptability were examined considering both quantitative and qualitative data. We considered the number of individuals who fit the criteria and accepted the invitation to participate, voluntary dropouts, non-intentional dropouts, and participants whose attendance was rated as high, medium, and low. We explored possible reasons for voluntary dropouts and low attendance considering sociodemographic and clinical profiles as well as formal and informal home care assistance and participant reports.

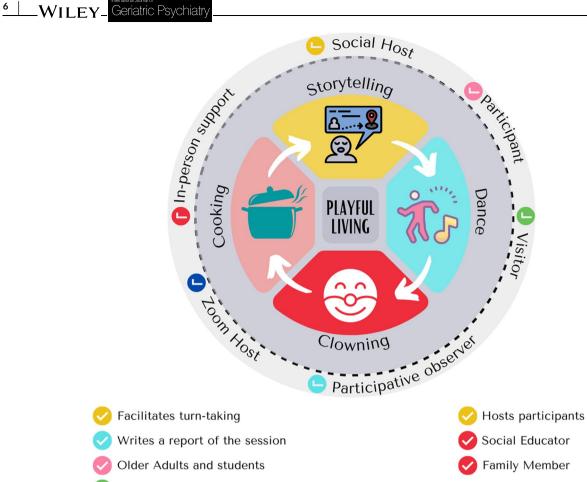
A preliminary analysis of two types of qualitative data was carried out: (1) participative observation (PO) to describe activities throughout 3 months and (2) thematic analysis of evaluative conversations in each group to collect participants' perceptions about the program at the end of 3 months. PO<sup>34</sup> was carried out throughout 12 sessions between November/2020 and February/ 2021. All meetings were recorded, and the observational field notes of undergraduate students were analyzed to describe sessions. The rigor of the qualitative data analysis was ensured by triangulating the students' field notes of participative observations with the careful review of video recordings by two professors and a doctoral student with experience in qualitative analysis. This procedure allowed the prevention of bias and confirmation of observations by checking nonverbal signs of engagement and emotion during sessions.

The evaluation of perceptions on the program was based on an open-ended question (How has the program been for you so far?) and participants were encouraged to elaborate their answers and talk about what they liked and did not like about *Playful Living* and which activities they thought were more useful or pleasurable. The recordings of the evaluative conversations were analyzed for each of the four groups of participants of the program thematic analysis.<sup>35</sup> The method presupposed a comprehensive reading of observational field notes and an attentive review of the recorded videos of each conversation circle, including transcriptions of participants' responses. The exploration of these materials was done by the same team members who conducted the PO analysis. These three professionals reached an interpretative synthesis that expressed the central themes appearing in conversations.

#### 5 | RESULTS

Figure 2 shows the flowchart of participants throughout the study. A total of 41 prospective participants were invited according to referrals of speech therapists and social service professionals. Most of the individuals with dementia were already in advanced stages of cognitive decline and could not be included. The drop-out of one of the participants living with dementia signals that the judgment of the family on this participant's cognitive skills when entering the study may have been mistaken, although the family alleged that the advance of dementia challenged the continuity of participation. Most of the participants included had stroke-induced expressive aphasia. Thirty-four participants were recruited, 24 were retained and 83,7% participants had high and medium attendance to the program.

Despite the clear need for in-person support by family members who openly volunteered, two participants dropped-out of the study because their relatives were not able to provide regular support. Three participants had low-attendance rates for the same reason. These participants lived in areas which were out of reach for our social care partners and therefore they were not able to obtain support from social educators.



Z Team member from another group proposing the activity

Operates camera and microphone opening invitations and the Spotlight function

FIGURE 1 Activities and roles executed in the Playful Living program

Approximately 50% of family informants and participants chose not to complete the functional communication scale and mental health questionnaire measures, alleging that this was a stressful period for undertaking any evaluation. The 7-point scale of 21 questions in the Social Communication section of the Functional Assessment of Communication Skills for Adults (ASHA-FACS) was administered to 12 family members (M = 5.65; SD = 1.5; Cl = 0.9). Those scoring a medium of five were judged to need moderate to minimal help in social communication; a medium score of 6 meant minimal help. Most participants with expressive aphasia had mild to moderate linguistic impairments, featured by speech disfluencies, anomia and phonemic paraphasia, as well as agrammatism. They maintained relative functionality in conversations, and frequently used gestures and facial expressions. One participant had severe expressive aphasia, but his comprehension skills were rather preserved, and he was able to utter short words and use gestures and facial expressions. A family member accompanied sessions and provided information when needed. Participants with dementia had mild linguistic impairments and needed greater attention and memory remote and in-person support during communication.

Twelve participants completed the depression questionnaire (M = 6.1;  $SD = \pm 4.1$ ; Cl = 2.7), of which four presented depression. Ten completed the anxiety questionnaire (M = 7.4;  $SD = \pm 6.1$ ; Cl = 3.6), of which four presented generalized anxiety. Two of the participants with depression also had anxiety.

#### 5.1 | Participative observations of group sessions

A summary of the participative observations focused on the structure of sessions, activities and participants' responses is shown in Figure 3.

#### 5.2 | In-person and personal belongings

Family members living with participants or social educators frequently joined the activities. Their voices could be heard repeating instructions and stimulating participants to answer questions and make comments. Family members would engage in bodily activities such as hugging or dancing. One situation was particularly meaningful



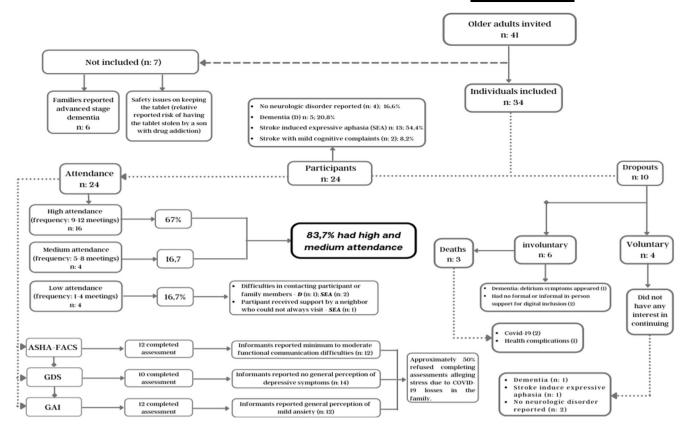


FIGURE 2 Flowchart: participant's inclusion, retention, and adherence

when a participant and his wife danced together after experiencing grief over the loss of a nephew due to COVID-19. Pets also participated—dogs and cats and even other animals, such as a rabbit and a rooster. One fun activity included a rooster. As the rooster crowed frequently, the participants were familiar with it and played by imitating the animal. Home utensils were also used and engaged participants in meaningful social sensory experiences. A frequent regional element present in the groups was the virtual *mate* circle. *Mate* is a hot tea drink—a cultural trait inherited from the indigenous people from the state of Rio Grande do Sul—which is collectively shared, and the practice promotes sociability. Several times the question, "who is drinking *mate*?," could be heard.

# 5.3 | Sensory and cognitive challenges for digital inclusion

Hearing difficulties were common and not always solved by using headphones due to the need for in-person support. Therefore, the high volume of the tablets would often produce an echoing effect. When echoing persisted, the Zoom hosts had to explain that they would have to silence the participants' microphone. Sometimes unintelligible speech was difficult to understand, especially when participants would not position the tablet correctly to capture face and gestures. Team members would often need to instruct participants to position tablets correctly, which was also the case when light did not illuminate their face. The most common barriers were difficulties learning to activate the microphone and camera, to "troubleshoot" technological problems such as not activating the audio when entering the Zoom room or experiencing abrupt disconnection. When visual prompts on how to activate the microphone and the camera did not help, the Zoom hosts explained that they would send a written request for them to open their camera or microphone and that all the participants had to do was to click on the written message.

The most frequently observed cognitive challenges were related to memory and executive difficulties and many participants forgot meetings and did not check messages on their tablets. Some had their tablets turned off or did not hear the call from the student. On some occasions, family members were stressed or faced health problems and forgot about the scheduled meetings or did not answer the calls. Regular friendly reminders were helpful to alert participants of the session times and remind them to use certain items during the session. Team members who made individual calls were mindful of critical periods faced by the family and always made sure that participants and family members felt supported if they needed some time off.

#### 5.4 | Activity facilitation

The social hosts of the sessions called for the participation of each of the group members during activities, addressing them by their <sup>8</sup> WILEY Geriatric Psychiatry

Structure	Activity	Summary of participatory observations
Greetings 20 min.	Technological support and conversation	Light welcoming conversation while participants arrive in the virtual room. Technological support from the students, family members, and social educators. Students use Whatsapp video calls to overcome technological difficulties. The Social host creates a safe space for checking moods and slow conversations take place while everyone waits for those expected.
Warm-up 10 min.	Embodied activity to guide attention and connect with playfulness.	The 'therapeutic bath' is the most requested warm-up, consisting of a self-massage. After using an imaginary soap, each participant is called into an imaginary circle and all participants play that they are sending a shower with their figers towards the screen to wash out the bubbles of each one thatappears in the Zoom Spotlight.
Main activity 20 min.	Dancing	Imitating the movements of participants who are in the Zoom Spotlight is often regarded amongst the most enjoyable dancing activities. Most participants choose to dance while seated to avoid falls. Music engagement is extremely valued, and participants often ask for their preferred songs. Partipants also sing and later share personal memories of songs.
	Clawning	Clown play is most frequently experienced without the red nose as many participants are new to this practice. One of the clowns inspired activities mentioned as most appreciated mobilizes the use of home materials to evoke imaginative and funny ways of using daily objects. Short informal performances take place with participants on Zoom Spotlight. A participant experienced in practicing clowning pairs with a student to show how to express emotions while using a mask to prevent covid-19. Another participant plays the role of a scientist who had discovered a vaccine for covid-19 which had the side effect of making people feel happy. The clown scientist speaks in Grammelot*, while his assistant translates.
	Cooking conversation	Sharing recipes, knowledge and family memories about cooking seems motivating even without proposing hands on cooking. Pictures of ingredients and of Brazilian popular dishes are shared on the screen instead of asking participants to handle the actual ingredients and to practice cooking. This boice was made to avoid the need for buying ingredients.
	Storytelling	Storytellers are on Zoom's Spotlight when telling the story. They seem to maintain participants' attention through facial expression and prosody. Short sentences and day to day as well as poetic language are used while keeping important ideas connected. Participants even to enjoy retelling stories and remembering the names of characters with support. Conversations about the stories revolve on finding meaning by connecting the story to their own experiences. One of the groups adopts a puppet that accompanies the team storyteller. A participant starts to bring his own puppets, so the storyteller's and the participant's puppets often perform dialogues. In addition to stimulating communication, memory and imagination, this activity promotes the appreciation of black culture. Many of the stories involve black characters and themes related to blackness in Brazil. In a storytelling about a legendaryquilombola**, one of the black participants, has her daughter at her side and says she loves these stories while the daughter shows a picture with the orixi lemanjá*** on their house wall.
Farewells 10 min.	Sharing and closure	Participants are encouraged to share feelings about the session, while students safeguard the floor for conversations to flow feely and effortlessly. Participants are also encouraged to take the lead in the concluding thoughts. For example, often participants spontaneously choose to lead a short payer at the end of the session or share a poem or a wise thought before they say their goodbyes. In these moments participants often demonstrate their appreciation towards the group through heartfelt comments on their gratitude for the experience of keeping connected. The 'virtual collective hug' at the end of sessions becomes a shared culturd gesture, also appearing whenever someone in the groups expresses a need for support or affection.

FIGURE 3 Structure of the program's sessions and participatory observations of activities

names and making short requests and yes/no questions or providing person-oriented activity instructions (according to expressive skills) in order to ensure engagement. Alongside, family members or social educators who provided in-person support to participants made repetitions and clarifications when needed. Activity instructions were simple and provided emphasis to nonverbal communication. Imitation and repetition were frequently embedded in activities. Most sessions had approximately one hour length; sometimes sessions had to be extended to make sure all participants had their turn.

#### 5.5 | Participants' perceptions of the program

Evaluative conversation sessions at the end of the 3-month period showed that participants perceived the program as supportive and reported feelings of belonging. No negative consequences were reported in relation to the experience during or after one-to-one or group calls. The analysis captured thematic saliency of feelings of connection and perceived learning. In all groups, the most frequent answers of participants were positive assertions on social connection, such as: (P5) "I like to see everyone on the screen" (P2). The feeling of learning from the experience was reported both by the older adults and undergraduate students. One indigenous older woman said she has learned a lot from the program and enjoyed being in contact with university students. This participant said she had only two years of education and learned how to read at the age of 30. After explaining her background, she said, "I am very happy to learn from you" (P1) P = participant. A student replied, "We learn with you, and we leave sessions with a warm heart" (E1) E = Student. In another group, a participant mentioned social engagement and learning, "We sang, we cried. It was so much fun; it will stay in my heart. I loved you, see, you live in my heart. It was great, great fun, we learned a lot from you!" (P2). In another group, one of the students commented that one of the best things the project taught her was her own well-being promotion. She added, "We work with joy, affection, creativity, and imagination." Following the dialog, participant P4 added, "Young people, in addition to helping us, are learning with this project." This participant (P4) reflected on feelings of loneliness and aging, "older adults are usually slower, people don't have much patience... family members often don't have time." Here in the Playful Living program, we have someone to talk to and to listen to." He also pondered, "family members invite me to go for a walk, go to the beach, I apologize and say, I can't, I have an appointment, I'm in pain, I can't walk properly... these are my excuses for not getting in

*their way.*" He pointed out that in the *Playful Living* program he does not feel like a "*dead weight.*"

#### 6 | DISCUSSION

The study showed that the Playful Living program is feasible in terms of recruitment, retention, attrition, and acceptability for Brazilian vulnerable older adults with and without stroke and dementia induced cognitive impairments. In line with studies supporting successful inclusive conversations with people with aphasia and dementia.<sup>36</sup> participants who attended the program were able to participate in conversations using verbal and nonverbal strategies and rely on the support of their communicative partners. These results are in agreement with authors who consider that repositioning agency during interactions with older adults with cognitive impairments is crucial for their wellbeing during communication. When placed in a comfortable and horizontal environment that favors exchanges, the process of sharing is eased and voice is given to self expression.<sup>37</sup> The activities proposed in the program were inclusive, called for each participant's engagement and respected their processing time. This created confidence and instigated enjoyable moments for both young and older adults. As argued by authors interested in the use of digital technology to promote the interaction of younger adults with older adults living with dementia, creating meaningful and empathetic intergenerational engagement requires a thoughtful and sensitive approach towards older adults with cognitive impairments.<sup>37</sup> There is a change in communication, rather than a loss of ability to communicate. The impetus to understand this change must be placed on the communicative partners of older adults living with dementia.<sup>37</sup> The same can be said about the process of communicating with people living with aphasia.<sup>36</sup> Rather than expecting the person with diverse cognition to make up for cognitive deficits, future health professionals should be prepared to view communication differently and facilitate inclusive interactions. Playful artistic activities seem to favor this understanding and may help fight against the stigma faced by vulnerable older adults.<sup>30</sup> Embodied practices such as dancing and clowning can be especially didactic in promoting a change of perspectives about communication.<sup>29-31</sup> Such practices require communication beyond speech. They promote the experience of learning to be nonverbally affected by others and finding joy in sharing new and unexpected patterns of communication.<sup>31</sup>

Many of the observations of the dynamics of interactions during the remote group activities of the *Playful Living* program were in line with literature on successful digital inclusion experiences of older adults. Research on digital inclusion of people with dementia has shown that creating and sharing personally meaningful experiences online helps individuals to build connections with their peers.<sup>38</sup> One study showed that the communication preferences of older adults suggest the need for social technologies to allow them to express their individuality and actively engage in reciprocal communication with others.<sup>39</sup> Our observations agree with the findings of these studies, reinforcing that artistic and creative activities are highly accepted by older adults with cognitive impairments. As shown elsewhere, artistic experiences offer a supportive context for people to communicate through multiple modalities without strict conversational rules.<sup>38</sup>

We highlight the frequent initiatives of artistic performance from participants, who often spontaneously lead singing, clowning, dancing and puppetry informal presentations during group sessions of the *Playful Living* program. Older adults living with aphasia and dementia seem to experience joy in performing art presentations, this has been reported in studies which describe the practice of clowning,<sup>40</sup> musical performance,<sup>41</sup> and stand-up comedy sessions.<sup>42</sup> Exploring the therapeutic effects of actively engaging in art performance is a promising area of investigation, and further studies should seek to obtain robust findings on the effects of such practices, as they seem to have the potential to stimulate agency and wellbeing.

Observations on the emphasis given by participants to their personal objects and cultural traits during live-stream group sessions are in agreement with recent studies conducted with older adults that showed that including sensorial activities and tangible objects is particularly important in intergenerational remote interactions.<sup>37,43</sup> As observed elsewhere,<sup>38</sup> activities including poetry books, daily home utensils, and personal objects that evoke positive memories are well received by older adults with cognitive impairments and express self and personhood in virtual settings.

The acceptability results of the program confirm the need for further investigations on remote interventions, as pointed out by authors that emphasize the relevance of encouraging Brazilian older adults to engage in meaningful virtual interactions.<sup>23</sup> Engagement with art-related activities and digital interaction at home can be a source of joy for older adults during the pandemic, as these activities can help with coping with stress in this period.44 The four types of activities adopted in the Playful Living program were accepted by participants, possibly because these activities stimulated engagement and empowered participants to use preserved communication skills. The literature has shown that older adults living with cognitive deficits enjoy and benefit from interacting in activities such as dancing, storytelling, clowning, and exchanging cooking recipes.<sup>22-26</sup> The combination of activities is in line with authors who propose that carrying out community person-centered holistic interventions demands creativity and innovation from healthcare teams.<sup>33</sup>

Further research must advance the investigation of the effects of mental health interventions conducted in virtual settings.<sup>45</sup> There is a lack of studies investigating the feasibility and acceptability of livestream group activities with older adults living with cognitive impairments. One study demonstrated high acceptability of people living with dementia for live-stream group conversation and virtual lectures for learning new mental health habits.<sup>46</sup> To our knowledge, no other study investigated the feasibility of embodied live-stream group activities with people living with aphasia and dementia. Bek et al.<sup>47</sup> found that dancing was feasible with people with Parkinson's. This population expressed a strong preference (77%) for continuing live dance practices (including interactive and streamed classes alongside in-person classes) during the COVID-19 pandemic. A considerable part of the participants of the mentioned study perceived mood-changing benefits from home-based dance practice.<sup>47</sup> The Playful Living program included dance activities, however to our knowledge, none of the current publications explore the feasibility and acceptability of the other playful group activities in live-stream meetings with older adults living with cognitive impairments. This signals the potential impact of the current feasibility study and future implications for further investigation of this innovative approach.

Difficulties in using technology observed in the current program have been reported by many other studies that investigated the response of people with aphasia and dementia to telehealth interactions.<sup>48-50</sup> As the literature suggests, these challenges are not insurmountable, and the support strategies offered in the Playful Living program are similar to those recommended.<sup>49,50</sup> Advances must be made to make technology and telehealth interventions available to vulnerable older adults. However, giving access to technology is not sufficient. In the current study, a considerable part of the drop-out and low-attendance results calls for attention on the need for providing in-person digital support to this population. Our findings demonstrated that it was not possible to digitally include participants who depended on in-person digital support and who could not receive it from family members or from our social care partners. Trying to build collaboration with a wider network of family members and neighbors in order to reduce the responsibilities of the main caregiver was not sufficient in these cases. The greatest limitation that the program faced was that these few participants lived in areas which were out of reach for the social care team connected to the program, so our social educators were not able to provide the inperson digital support. The literature shows that older adults with cognitive impairments often wish to avoid burdening family and friends in negotiating support for digital inclusion.<sup>46</sup> Offering the provision of assessing formal support for digital inclusion through public services may be key for the success of these interventions. Public policies must advance to attend to the needs of hard-to-reach older adults whose family members suffer great burden from being exposed to social and economic problems, especially in critical periods such as the current one. The public health crisis caused by the COVID-19 pandemic has demonstrated that digital technological tools should be in the agenda of policy makers to advance efforts to support vulnerable families.45

Another challenge faced by the current study was experienced during the recruitment stage, as it was difficult to identify black older adults with a medical history of stroke or dementia in the records of public health institutions. The Brazilian health information systems often fail to provide search mechanisms that offer analyses with racial stratification. When the race/colour field is present in instruments, many professionals fill out the 'ignored' category. This indicates that there is a lack of awareness of the importance of this data, which becomes a major barrier to fighting racism and promoting health equity in Brazil.<sup>51</sup> Older black adults who suffered strokes have the highest mortality rates due to their lower socio-economic conditions.<sup>2,52</sup> The life expectancy of older black and brown adults is lower in Brazil, and, in addition, there are more single older black adults as well as a greater number of older black adults

who do not have children.<sup>53</sup> This may result in a poorer social support network, which would have negative consequences for accessing the health system and for early detection of health problems, including dementia. These may be some of the reasons behind difficulties in reaching this population. The consequences of structural racism and lives at the intersection of a variety of additional social determinants (class, disability, and age) lead to compounding marginalization and exponentially complicate the experience of health in Brazil.<sup>51,53,54</sup>

Strategic alliances between universities and public social and health sectors can be advanced and develop a training model for professionals to promote digital inclusion and in-person care for vulnerable older adults who need direct assistance. Universityaffiliated arts, social service and health professionals can provide training for future professionals to begin meeting these needs. As experienced in the Playful Living program, remote services can break down geographic barriers and create a bridge between universities and public services for people from diverse places and backgrounds. Even after the pandemic, remote programs can provide access to people with mobility and health problems and reduce transport time and costs.45 Further developments of the Playful Living program involve continuing our efforts in reaching and promoting the mental health of vulnerable older adults while including new teams and participants from the northeast region of Brazil.

#### 6.1 | Limitations

This study did not include cognitive assessments of participants, nor did it provide a comparison between pre- and postintervention measures. In addition, many participants and family members did not complete the questionnaires and assessments, alleging family health and stress related reasons connected to the pandemic. It is important to acknowledge that the qualitative analysis was preliminary, and the participants' perceptions were collected by the teams who led the interventions, which perhaps prevented any criticism. On the other hand, participative observations and the review of recorded sessions confirmed the active participation and nonverbal signs of satisfaction during group activities. Overall, the results are largely positive, and the triangulation of objective quantitative attendance and qualitative data on the engagement of participants support the feasibility and acceptability evidence.

## 7 | CONCLUSIONS

This preliminary study shows the feasibility and acceptability of offering remote playful activities for Brazilian vulnerable older adults, including those living with cognitive impairments. Moreover, the program's experience demonstrated how virtual settings can be humane and how interdisciplinary teams can establish meaningful interactions in this new environment. Participants embraced opportunities to express themselves creatively and to connect socially in a playful remote setting. Likewise, digital skills of undergraduate and graduate students were developed and their interest in relationships with cognitively diverse older adults was promoted.

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#### CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

#### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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