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Article

Internet-Based Video Program to Promote Physical Activity, Health, and Well-Being of Brazilian Older Adults during the COVID-19 Pandemic

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Abstract: In 2020 and 2021, the SARS-CoV-2 coronavirus spread rapidly across the world, causing the COVID-19 pandemic with millions of deaths. One of the measures to protect life was confinement, which negatively affected physical and mental health, especially of the older population. The aim of this study is to present and evaluate the methodological procedures of a telehealth and eHealth program "U3A in Motion", which was composed of videos of physical exercises and activities to promote the mental health and well-being of the older Brazilian population during the COVID-19 pandemic. The procedures included the planning, editing, and dissemination of videos through WhatsApp, and also on the YouTube platform, Instagram, and on a website. A total of 82 videos were created. The action reached 350 older adults from the local community in the northeast of Brazil, as well as being accessed by approximately 3000 other older adults from institutions in the southern region of Brazil. Based on the evaluation of activities through telephone interviews, it was found that older adults participating in the "U3A in Motion" program during confinement were highly motivated to access exercise activities, mainly via mobile phones, and reported a positive effect on physical and mental health.

Keywords: eHealth; telehealth; online activity; pandemic; COVID-19; older adults; aging; vulnerability

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1. Introduction

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), responsible for the coronavirus disease 2019 (COVID-19) pandemic, has rapidly caused the most severe global health crisis humanity has ever experienced. In Brazil, where this study was carried out, when the COVID-19 pandemic began the total population was approximately 210 million inhabitants [1], with more than 230,000 registered deaths already during the first year of the pandemic, and more than 180,000 further registered deaths during the second year [2]. For those who survived, the context of the pandemic brought a series of life changes, including concerns and threats to health, quality of life, and well-being.

The social isolation restrictions imposed by many countries to defeat the COVID-19 pandemic unfortunately also evoked negative consequences on the physical and mental health of our societies worldwide [3,4]. Thus, in a short period of time, the older adult population became highly vulnerable [5,6]. Thus, as if the set of transformations associated

with natural physiological aging were not enough, social isolation has enhanced and weakened the health of the older adult population [7], such as reducing muscle strength levels, slowness, imbalance, aerobic capacity, and flexibility [8,9]. Moreover, periods of self-isolation, quarantine, or lockdown caused abrupt separation from family, friends, and daily activities, including regular exercise [10]. As a result, many older adults expressed feelings of loneliness, followed by mood swings [11,12], sleep quality [13], and eating disorders [14], facilitating the emergence of depression [15] and anxiety [16].

Thus, during the pandemic, a strategy used to bring people of all age groups together was the use of Internet-based technologies [17], facilitating the maintenance of social relationships, as well as the conquest of new friendships, free from the risk of infection by COVID-19 [18]. Studies have reported that when it comes to the older population, a non-digital native group [19] who tend to have technophobia regarding the use of cell phones, computers, and social networks [20,21], for many people connecting with others through technology was a challenge [22]. In this context, it is important to highlight that due to the lack of knowledge about web technologies, older adults are also unaware of the dangers of the digital world. Thus, during the pandemic, this population was more exposed to believing in fake news [23]. Nevertheless, it is known that confinement motivated many older adults to get involved with technologies [24,25]. However, on the one hand, the use of the Internet has increased, but on the other hand, these mechanisms are not always friendly for the older population, especially for those with disabilities [26]. Another point to consider is that access to the Internet and electronic devices is still not accessible to many older adults residing in low-income countries.

During the confinement of COVID-19, to encourage populations, especially older adults, to remain physically active, which also benefited their mental well-being, the World Health Organization launched the campaign "Stay physically active during self-quarantine" [27]. Physical activity (PA) interventions through the use of Information and Communication Technologies (ICTs), especially Internet-based interventions, are a methodology with a high potential to intervene and promote principles of education and health [28]. Among the benefits are the low cost, 24-h access to the platforms every day, access to many contents via smartphones in different locations, and ease of communicating and interacting with many people at the same time. The effectiveness of ICTs for the delivery of treatments in general has already been proven in several chronic diseases [29], including the reduction of cardiovascular risk factors [30] and obesity [31,32]. Thus, during the COVID-19 pandemic, home exercise programs were also offered via virtual space as a strategy to increase the PA levels of citizens of different age groups [33]. In a study that evaluated people's interest in exercise videos on the Google platform [34], it was found that, compared to the first half of 2019, searches for videos on physical exercises during the period of the first wave of COVID-19 (year 2020) were substantially higher. This demonstrates the need perceived by users to find strategies to combat sedentary lifestyles and promote well-being in their homes.

The literature showed that during the COVID-19 pandemic, a large part of the older adult population sought technologies as an alternative to mitigate the impacts of social isolation, which in turn benefited their mental and physical health [14,34]. In the case of the older adult population, it is known that there is a positive association between high PA levels and a better general health status [7]. In general, the WHO recommends that to maintain adequate PA levels, it is necessary to perform a weekly minimum of 150 min of moderate-intensity exercise, or 75 min of vigorous-intensity exercise [35]. However, during the COVID-19 pandemic, this was not possible in the usual social context. According to Sasaki et al. [36], Japanese older adult PA levels decreased during the pandemic by between 5 and 10%. In Brazil, compared to the pre-pandemic period, frail older adults even had PA levels reduced by up to 79% [37], as well as having mobility restrictions five times greater. In the USA, older adults indicated a daily increase of 20.5% in the sitting position [15], which is considered a high-risk factor for a sedentary lifestyle. In turn, investigations have also highlighted that older adults between 60 and 70 years old, who practiced physical

exercise regularly during the pandemic, showed increased levels of PA compared to those who are older and inactive [14,36].

Although Internet-based activities aimed at promoting the physical and mental health of the older adult population during COVID-19 have been widely carried out and disseminated [38], there is no consensus on methodological procedures (i.e., planning, execution, evaluation) of activities. Thus, it is important to disseminate and evaluate different models of strategies for promoting the health of the older adult population in the academic environment via the Internet, as science does not exclude the possibility of new viruses and future pandemics emerging [39,40]. Therefore, we must be prepared to offer accessible and efficient care measures tailored to different populations [41].

While the COVID-19 virus has been a huge threat to citizens of all countries, there have been nations where the population has been severely impacted in particular. Among these countries, Brazil was one of the countries with the highest number of deaths before the discovery of immunizers [42]. Allied to this fact, a large part of the Brazilian older population lives in a vulnerable situation [43]. During the COVID-19 pandemic, this has become more evident among those residing in the northern and ortheast regions (the location of the present study), especially in cities far from large urban centers [44]. Therefore, during the COVID-19 pandemic, it was necessary to create health promotion strategies [45] that would quickly reach the older population. However, in addition to being effective, they should be made attractive through content that is simple to understand and capable of motivating older adults to transform sedentary and sometimes saddening lifestyle habits. To address these challenges, the present study aims to present the methodological procedures of a video-based program "U3A in Motion" that was composed of videos of physical exercises and activities to promote the mental health and well-being of the older Brazilian population during the COVID-19 pandemic.

2. Materials and Methods

2.1. Study Design

This is a qualitative study. This method allows obtaining descriptive data through the researcher's contact and interaction with investigated situations or objects [46]. Due to the isolation and social distancing requirements of the COVID-19 pandemic, the qualitative methodology proved to be adequate to present the procedures used for the creation, execution, and evaluation of an eHealth program, as well as the perceptions of older adult users. One of the characteristics of the qualitative method is the semi-structured interview [47], which allowed researchers to talk to video users through phone calls, preventing the spread of the COVID-19 virus. The contents of the present study were part of the program entitled "U3A in Motion" carried out between April 2020 and March 2021 by the University of the Third Age (U3A). This U3A is linked to the Federal University of Vale do São Francisco (UNIVASF), located in the city of Petrolina (354,000 inhabitants), in the northeast region of Brazil. The U3A was created in 2015, and since then it has offered to the local older population, at no financial cost, a set of activities (60 min, twice a week): (1) sports (i.e., Pilates, gymnastics, tennis, water aerobics, bodybuilding); (2) specific lectures in the area of health with a focus on Gerontology; (3) psychosocial dynamics; (4) artistic expression workshops and use of digital technologies (i.e., Internet, Facebook, Instagram, email, smartphones, computers, tablets); and (5) lectures in the area of planned and successful aging (preparation for retirement).

Until the beginning of the COVID-19 pandemic, the U3A offered 24 h of activities per week for 140 elderly people [48]. With the enactment of the lockdown in Brazil on 20 March 2020, face-to-face activities with the older adult community were suspended. Consequently, this group of older adults felt physically, emotionally, and mentally fragile due to the lockdown restrictions. An alternative for U3A was to maintain contact with these older adults remotely. Thus, the "U3A in Motion" program emerged, based on the principles of telehealth [49] and eHealth [50], with the purpose of promoting health and well-being during the COVID-19 pandemic [45]. Telehealth and eHealth are defined as

the use of information and communication technologies (ICT) to improve or enable health care [49,50]. Both have the advantage of breaking down barriers to promoting health, health education, and health administration [51]. It is worth mentioning that the actions presented in this study were carried out using the asynchronous method, which proved to be more feasible to facilitate the distribution of information to the homes of older adults. Another advantage of this technology was the storage of videos and photos on web platforms, allowing users to view the information as many times as they wanted.

2.2. Participants

Two groups were part of the "U3A in Motion" program: the executing team and the users (older adults). The first group consisted of four students from three undergraduate courses at UNIVASF (i.e., Physical Education, Psychology, and Business Administration), and a professor from the Physical Education course (UNIVASF), who is also the U3A coordinator. Users of the "U3A in Motion" program were 140 citizens (aged 60–82) from the local community, all members of U3A prior to the COVID-19 pandemic. Another group of users were members of older adult social groups also from the city of Petrolina (n = 210; 60–92 years old). A third group of older adults cannot be counted directly, as they were members of institutions located in the southern region of Brazil, approximately 2200 km away from the origin of the "U3A in Motion" program. In this case, the videos were sent via WhatsApp to three coordinators of the U3As; each institution had between 600 and 900 older adults. In turn, the coordinators posted the videos in different WhatsApp groups at their institutions. Consequently, the videos were passed on by older students to friends. Given the ease and speed of disseminating the videos via WhatsApp, it was not possible to accurately calculate the impact of the videos outside the city of Petrolina.

2.3. System Development

2.3.1. Video Planning

Initially, a pilot study was carried out with four classes using the synchronous modality. However, the method did not prove to be productive, for the following reasons: (1) difficulty for older adults to follow the exercises due to vision and hearing problems, (2) difficulty accessing classes at scheduled times, (3) commotion during classes because too many older adults were talking at the same time, and (4) Internet problems. Finally, we chose to adhere to the "asynchronous" method, recording videos and sending them to older adults twice a week via WhatsApp, as well as posting the material on YouTube, Instagram, and the U3A website.

The planning of the activities of the "U3A in Motion" video program originated from the set of field experiences carried out between 2015 and 2019 by the U3A teams (i.e., Physical Education, Medicine, Psychology, Nursing, Pharmacy, Languages, Law for older adults) with the local older population. These experiences have been documented [48,52]. Initially, the executing team contacted 15 U3A older students by telephone to learn about their daily lives during the COVID-19 confinement. Thus, based on this information, the contents that were worked on before the pandemic were adapted for video classes.

2.3.2. Video Recording and Editing

The video recording and editing procedures were carried out in three phases, presented in a flowchart (Figure 1). Phase I consisted of preparing the contents. Afterwards, the videos were recorded by the instructors in their homes and sent via a link to the responsible editor, who organized the files into folders related to the types of content (physical exercises or dynamics related to mental health). After the first phase, the raw video files were imported into a video editor program. In phase II, the audio was improved, a free soundtrack was added to the video, and subtitles and animations were included to make the material more enlightening for older adults. In phase III, the final adjustments were made, and the videos were shared via the YouTube channel, the U3A/UNIVASF website http://unati.univasf.edu.br/ (accessed on 5 March 2023), and WhatsApp groups.

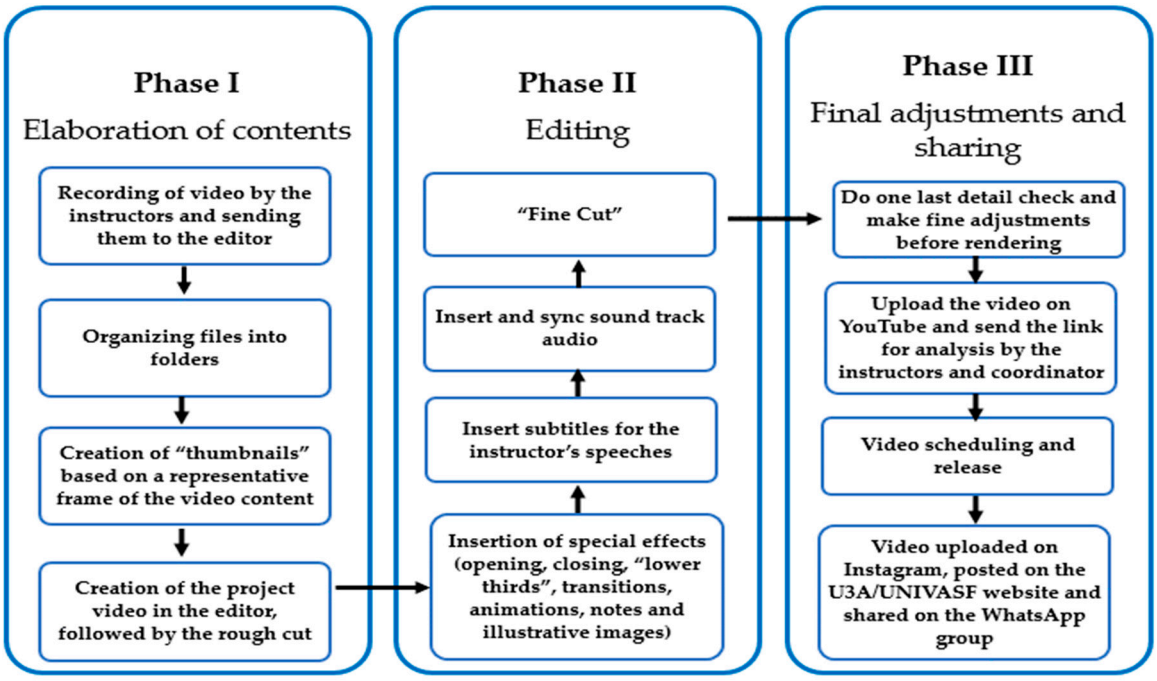

Figure 1. Flowchart of video recording and editing procedures for the "U3A in Motion" program (2020–2021).

2.3.3. Video Sharing on the YouTube Platform

Figure 2 presents a set of images of the videos on physical exercise and psychosocial dynamics offered on the YouTube platform weekly to the older adult population. Overall, over 12 months, 69 videos related to exercise were made available, and 18 other videos in the field of mental health.

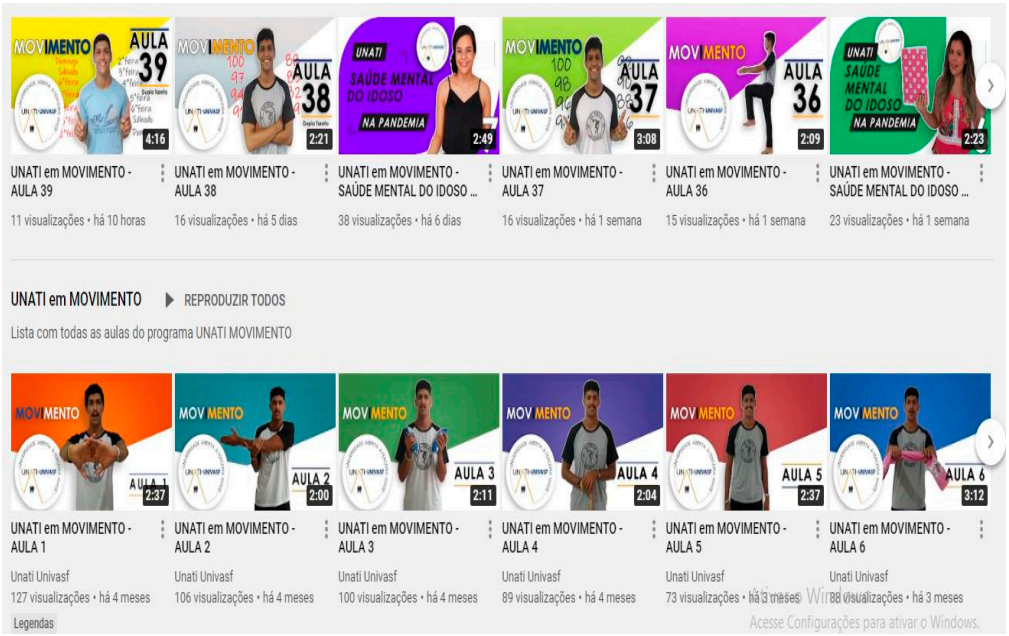

Figure 2. Images of the videos of the "U3A in Motion" program posted on the YouTube platform (2020–2021).

2.3.4. Video Sharing on Instagram

Figure 3 presents the mobile phone screen logged into the U3A/UNIVASF Instagram page. Thus, it is possible to observe in the set of images the videos of the project "U3A in

Motion". Through this channel, it was possible during the COVID-19 pandemic to follow people and institutions, disseminating the program's activities in a quick, objective, and safe way.

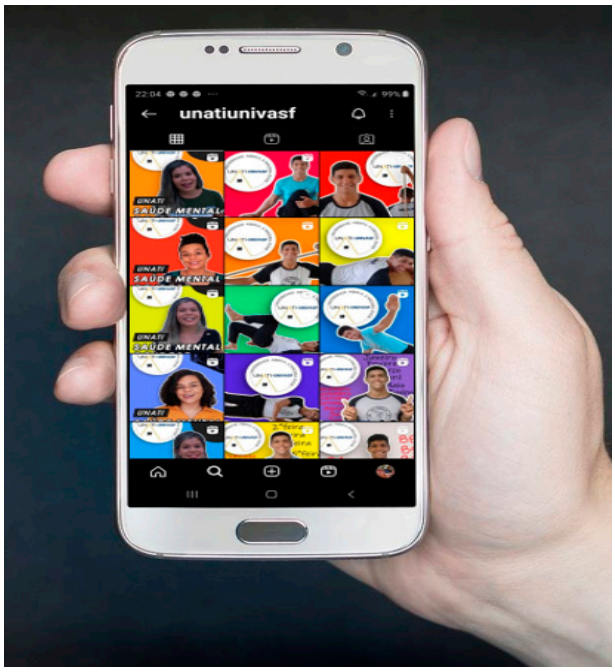

Figure 3. U3A/UNIVASF Instagram, videos of the program "U3A in Motion" (2020–2021).

2.4. Evaluation of the Program "U3A in Motion"

In order to understand and evaluate the profiles of video users, their motivations, and possible barriers to carrying out activities, as well as the impacts of activities on physical and mental health, two strategies were adopted: (1) weekly; the executing team of the "U3A in Motion" program checked user comments on the YouTube and Instagram platforms to find out the degree of user satisfaction; and (2) participants were randomly selected from the WhatsApp groups and were spoken with over the phone (20–30 min) to find out about their experiences with the video classes. In cases of consent, the audios were recorded. Participants from other institutions or cities in Brazil were also randomly selected from WhatsApp groups. This process was carried out by the coordinators responsible for the other institutions. The questions asked were the following: (1) How did you find out about the program? (2) What are the main difficulties in understanding and executing the exercise? (3) What do you like most about physical training? (4) What do you like most about psychosocial dynamics? (5) Do you have suggestions to improve the videos?

Thus, based on the testimonies, the perception of the participants of the "U3A in Motion" program could be presented. This measure addresses the impacts that the video-based program had on the participants' physical and mental health. Through the testimonies, it was possible to unveil and explain world phenomena experienced by the target group of older adults during the COVID-19 pandemic [53], more specifically to understand phenomena at the level of subjective reality based on experiences with technology [54].

Analysis of the Interviews

After data collection, the interviews were transcribed and analyzed according to the content analysis method proposed by Gallagher and Porock [55]. The phases of the process included: (i) organization of the analysis: careful reading to identify relevant statements about the set of five questions asked; (ii) codification: the meanings of the statements were formulated into codes and organized in a spreadsheet; (iii) categorization: extraction of codes, which were consecutively improved and discussed by the researchers; with no disagreement, themes and categories were maintained; and (iv) treatment of results:

analysis of inference and interpretation of results. In the present study, from a total of 18 h of data from semi-structured interviews carried out with 32 participants of the "U3A in Motion" program, the testimonies of 12 participants (n = 9 women, n = 3 men; age 60–81) will be presented. These testimonies have been selected for this paper, because they were the most precise and allowed us to address the detailed research questions.

3. Results

3.1. Physical Exercises

The activities followed recommendations for carrying out exercises during the period of the COVID-19 pandemic [56,57], focusing on the development of the following capabilities: strength, aerobic resistance, flexibility/stretching, and relaxation/meditation. Moreover, the activities presented in the videos considered issues observed in the pilot program, such as: (a) adaptation to the space of the residences; (b) adaptation of the instructor's body movement to the size of the cell phone screen; (c) use of clear and precise language; (d) indications on the video screen about the number of repetitions of the exercises (1 to 8), indications about changes in direction (front, back, right, left, up, down), the limb that would be worked (leg, arm, trunk), type of movement (flexion, extension), and correct mode of execution (inhale, exhale, slow, fast, stop, start). Table 1 presents the complete description of the physical exercise program, according to the order in which the videos were released over the 12 months.

Table 1. Physical exercises offered by the "U3A in Motion" program for video home training (2020–2021).

Focus	Video Number	Variations	Recommended Frequency
Strength	3–4, 7–11, 14, 16, 20, 23–25, 31, 32, 34, 44, 50–53, 56	- lower and upper limbs, abdomen	3 times/day
Aerobic resistance	35–36, 49, 61	- performance in a moderate way, in a safe environment	3 times/day
Core stabilization and posture	27, 41, 43, 55, 60	- standing, sitting or lying on the floor/bed	3 times/day
Mobility exercises	6, 15, 26, 28–29, 33, 42, 45–46, 54, 57, 62	- spine, shoulder, wrist, hip, knees, ankle	3 times/day
Gait and balance	22, 37–38	- different directions - static, dynamic	3 times/day
Dual-task	39–40, 63–66	- association between motor and cognitive tasks	3 times/day
Flexibility/stretching	1, 5, 12, 17–19, 21, 30, 47–48, 59	- whole body	3 times/day
Relaxation/meditation	2, 12	- breath control, mental concentration	3 times/day

On average, each video had an average time of 3–6 min, divided into the following steps: (i) brief presentation of the teacher and the "U3A in Motion" program, (ii) brief presentation of the contents that would be worked on, as well as the importance of training for physical health, (iii) indications on safety measures during the execution of the exercises, (iv) presentation of the day's exercises. Considering that 3–6 min of physical exercise practice would not be enough to provide benefits to achieve adequate weekly levels of physical activity [35], participants were advised to perform the sequence of exercises proposed in each video 3–4 times. In this way, it was possible to achieve at one time between 9–18 min of physical activity at a light to moderate level. In turn, the participants

were also advised to repeat this same measurement three times a day. We emphasize that before the presentation of the exercises, the instructor informed participants about the security measures during the execution of the exercises, as well as the importance of carrying out the activities in a place with few objects around, as well as on a non-slip floor. This information was also provided in the subtitles and animation effects of each video. To further reinforce the security procedures, the team spoke with the participants in telephone calls.

3.2. Psychosocial Dynamics

The activities for strengthening the mental health of the older adults were based on the activities performed at the U3A before the pandemic period. In general, the dynamics (50 min) developed by the team of students of the Psychology/UNIVASF course with the population of older adults consisted of treating the issues of the aging process, which was approached in a playful way through games, strengthening the interaction of the whole group. For the pandemic period, the activities followed the three pillars already used by the U3A/Psychology team: (i) Creative dynamics: painting, collage, handicrafts, singing, writing, reading; (ii) Operative and therapeutic groups: self-esteem, self-image, cognitive stimulation, social relationships, commemorative dates; and, (iii) Interdisciplinary perspective: depression, anxiety, quality of life and well-being. Table 2 presents the 18 videos created, as well as the focus of each.

3.3. Interviews

The interviews are presented in four sections, representing the categories generated by content analysis. The testimonials of the 12 participants will be identified through pseudonyms, followed by age in brackets.

3.3.1. Discovery of the Program

When asked about how they received the first information regarding the activities of the "U3A in Motion" program, the main vehicle reported was WhatsApp, followed by the YouTube channel, and Instagram. Maria (60) mentioned: "I learned about the videos through the message from our U3A WhatsApp group. Soon after my colleagues sent messages commenting on the fact. We all were very happy because the body was rusty". Josefina (63) also received the first news about the program through friends: "I thought I would never do exercises again because the orders were to stay home. Suddenly, I received the first video, clicked, and my U3A Pilates teacher appeared. What a joy to see him speaking and sending positive vibrations to all of us". Many program participants were part of the activities of other older adult groups in the city of Petrolina. According to Paola (69), initially, she expected the coordinator of her institution to send the videos two months after U3A/UNIVASF came to Instagram: "I received the first video by WhatsApp. But I don't have the habit of checking messages. So they often accumulated and I didn't even realize it. One day I had a lot of back pain, automatically remembered the videos and started to replay the exercises regularly. Soon after, I followed the activities on Instagram". Eunice (76) was a U3A student in southern Brazil; her statement was as follows: "I received the videos twice a week in the WhatsApp group of our institution. So the video was posted, colleagues already started posting comments on WhatsApp below the video (laughs)".

Table 2. Set of psychosocial activities offered by the "U3A in Motion" program (2020–2021).

Themes	Methodological Procedures
1. Introduction	Presentation of intentions and importance of psychosocial activities during the period of isolation and social detachment
2. Memory processes	Simple approach on cognitive performance and possible impacts of pandemic for these functions, as well as suggestions for activities to exercise cognitive processes
3. Remember children's time games	Tasks to activate long-term memory and motivate participants
4. Plant cultivation	Stimulus to work with gardening, increasing the levels of physical activity in a relaxed way
5. Crafts	Stimulates to perform manual work and occupy the time in a productive and joyful way
6. List names of old friends and colleagues from U3A	Tasks to exercise long-term medium memory
7. Draw what comes to mind	Tasks to stimulate creativity and pleasure
8. Think about and remember happy moments of life	Tasks to stimulate memory and alleviate possible feelings of anxiety
9. Full attention and meditation	Tasks to relax and calm down
10. Tourism: Think of names of places you have already visited	Dynamics to travel through thought
11. Reading books, magazines, poetry	Task for relaxing, having fun, and expanding knowledge
12. Talk about emotions	Task to communicate with someone and talk/listen to everyday emotions
13. Write a letter to someone special	Task to communicate with someone through writing
14. Cognitive Games	Stimulus tasks of cognitive functions
15. Integrational activities with family children	Suggestions for activities to perform with younger families
16. Storytelling	Suggestion of activity to perform with a family member
17. Music of each generation	Task to relax and remember moments of the past through songs
18. Review photographs	Task to remember moments of the past

3.3.2. Difficulties with the Video Methodology

When asked about possible difficulties in accessing videos or performing physical activities and psychosocial dynamic tasks, we obtained the following answers. Eunice (76) revealed the following: "The biggest difficulty is that when the video arrives on WhatsApp, many start posting comments and the video goes up until you get lost between 20–50 messages. That's terrible! So I signed up on YouTube, I squeezed in the bell symbol: I didn't know it was there. I learned that from my grandson".

On the other hand, some who did not use information and communication technologies stated that they had difficulties. Clarisse (77): "For me it was a joy to receive the videos. On the other hand, I also had moments of apprehension because I don't know how to move very well on the mobile phone. I depend on other people to explain how I should proceed. But then I can see and review the videos and repeat everything as the teachers explain". João (80) also showed difficulties to access the videos: "The idea is great. But this is a modern thing and I don't know how to move these small devices. So I always expected one of my children to have time to show me the videos".

Another kind of difficulty encountered by older adults was their ability to view or listen to the indications provided in the videos, as Teresa (71) said: "My problem is with vision. The exercise. Many exercises, I already knew. So it was not difficult. In the case of psychology activities, it was easier because they are suggestions of activities we know: there are no details like exercise". Helena (77) had trouble adapting the exercises to her physical condition, which was weakened: "I always had difficulties with my two knees.

Now, during the pandemic, this worsened a lot because you stop doing water aerobics. Exercises are excellent, but I need the aquatic environment, which is without impact. So I even got in touch with the U3A teacher to advise me on how to do the exercises. He told me that some I should do sitting in the chair or lying on the bed".

3.3.3. Satisfaction with the Program "U3A in Motion"

In general, perceptions regarding the program activities were positive. According to Leonor (66), the contents of the videos exceeded their expectations: "I am very happy with the videos. I already performed several activities with my two grandchildren of 7 and 11 years. The 11 -year-old follows the U3A on Instagram. This is fantastic because she didn't know what I did there. With the videos, she became interested in Pilates exercises and had added the students of psychology: she likes the way they talk". A participant from the southern region of Brazil revealed the following: "I really like the two types of activities that are offered. I am a retired teacher, and I recognize the planning work these young people are doing: there is science in this! Friday and Saturday morning, my husband and I do the exercises of each video three times. We also discovered previous video exercises. So we exercised here in the room for an hour".

Pedro (74) and Solange (72) are married; both gave their testimonials about the impact of activities on their lives: "Before the pandemic, I wasn't used to exercise regularly. Now, I realized how good it is for health. Solange convinced me to accompany her in the exercises. At first, I sat watching, then I did some stretching exercises with Solange and I realized that it was good: the pain in the spine eased. Now, I decided: when the pandemic is over, I will start doing physical activity". Thereafter, Solange completed her partner's speech: "I've always been physically active, so being locked up at home makes me depressed and agitated. I've been doing the relaxation activities proposed in the videos. And I'm also trying to get busy organizing the albums, photography, listening to music, and drawing. Everything that the Psychology girls recommend".

3.3.4. Suggestions to Improve Future Videos

Regarding suggestions about what the videos should address and how, the testimonies of two participants summarize the view of the vast majority of the older adults interviewed. According to Antonia (81), the activities could continue even with the end of the COVID-19 pandemic: "Look, at the beginning everything was new, now it's a routine. We are in a new dimension of communication. it makes us suffer, but it also shows us different ways of living and coexisting. I like receiving these videos, you can keep sending them, because it makes it easier when we can access classes anytime and as many times as we want. I suggest more content to train the brain". Likewise, Hélio (72) said: "At first it was difficult to use the mobile phone, now I like it! You can keep sending me these videos, here at my house everyone already knows, including my children and their children. Even make a special program for the children. They don't know what to do all this time at home".

4. Discussion

Our study aimed to present the methodological procedures of the program "U3A in Motion", composed of videos of physical exercises and activities to promote the mental health and well-being of the Brazilian older adult population during the COVID-19 pandemic. We have shown that the program directly reached a considerable number of older adult U3As and older people's institutions in the city where the program originated. Furthermore, due to the use of technology, mainly WhatsApp, the videos reached the homes of a large number of older adults in the southern region of Brazil. Through the analysis of the testimonies, it was possible to attest that the suggestions of varied physical exercises, as well as the psychosocial activities, had a positive impact on the physical and mental health of the users.

During the COVID-19 pandemic, telehealth services were suggested to facilitate health policies [45,49]. Among the advantages of using telecommunication technology

was the facility for long-distance health care (remote mode), especially for geographically vulnerable groups, or in the case of a pandemic, for individuals isolated in their homes. A systematic review carried out before the period of the COVID-19 pandemic showed that eHealth users were able to promote higher levels of PA than those who did not use the technology [58]. However, it is worth noting that factors such as the type of exercise, age group, and sex can influence the individual's behavior with PA [59]. In the area of physical exercises, the eHealth tools found are digital, online, and Internet-based. Among the operators there are watches, apps, websites, videos, communities, and social media [60]. In general, these tools were created to help people exercise, benefiting their PA levels. In turn, the measure meets the recommendations to combat sedentary behavior [35]. According to the testimonies of participants in the "U3A in Motion" program, the videos brought guidance and motivation for older adults to become more physically active, gaining vitality, perceived by the improvement in muscle strength, balance, motor coordination, in addition to relaxation and pain reduction. According to testimonies, there was an improvement in physical and mental well-being. Another point highlighted by older adults was that the tips provided by the videos on how to manage free time strengthened intergenerational relationships in families.

In a previous study carried out in 2020 with U3A/UNIVASF students (n = 35; 70.5 $\pm$ 4.7 years) to verify whether they were sufficiently informed about the ways in which the virus is transmitted, as well as knowing the impacts of social isolation on quality of life [22], the testimonies brought to light a series of concerns of the older adults. Despite feeling well informed, older adults revealed a high degree of concern about the possibility of being infected by the virus and dying prematurely. Consequently, this made them anxious, causing mood swings, poor sleep quality, and loss of appetite and body weight. Another highlighted point was that due to the collapse of the Brazilian economy during the pandemic, family members had lost their jobs, and this raised the concern of older adults. Participants of the "U3A in Motion" program revealed in their statements that the videos helped to harmonize moments of tension in everyday life. Moreover, even people who did not exercise regularly before the pandemic said that they intended to change their habits and become physically active when everything returned to normal.

Our findings were in line with studies showing that measures with the use of mobile phones (WhatsApp) and social media (Instagram) were effective in promoting the health of older adults during the lockdown period [45,49]. In a study carried out with adult individuals who were working from home during the pandemic, classes were offered in synchronous mode through a smartphone application to promote health and physical conditioning [61]. According to the authors, the participants mentioned a lack of motivation to perform the exercises, as well as a lack of technical support to ensure the use of the App and the progression of the exercises. In the case of the "U3A in Motion" program, according to the speeches, although the activities took place in asynchronous mode, there was motivation to perform physical exercises, as well as to put into practice activities in the area of mental health. A possible explanation for the motivation of older adults in relation to younger individuals is that perhaps during the COVID-19 pandemic the older the individual, the greater the intensity of the perception of the negative impacts of confinement on physical and mental health [62].

The "U3A in Motion" program also brought important results for the U3A/UNIVASF. The main gain was that, through the creation of videos, part of the team (e.g., Physical Education, Psychology, Business Administration students) remained engaged with health promotion during the aging of the local community. Moreover, these students were able to stimulate and develop new skills. Consequently, the number of hits to the website http://unati.univasf.edu.br/ (accessed on 4 March 2023) increased by 180% during the COVID-19 pandemic. This was considerable, as it made its services more visible at both a regional and national level. Finally, considering that promoting the health and well-being of populations in low- and middle-income countries, in both rural and urban regions, requires simple, effective strategies that can reach a large number of people [63,64], it is possible

that technology-based initiatives can help disseminate important information. However, it is first necessary to make these technologies accessible to poor populations, both financially and by strengthening their understanding through educational measures. Therefore, it would be interesting for policy makers, researchers, and professionals in the areas of health and technology to work together in the search for useful mechanisms for the provision of services in primary health care [65,66].

Limitations

The present study has a number of limitations: First, because it is a cross-sectional descriptive study, it was not possible to claim causal mechanisms. Second, users' blood pressure levels were not assessed during video releases. Therefore, benefits of the activities suggested in the videos for physical and mental health could not be verified through objective tests or even through the application of psychometric scales. On the other hand, through the analysis of testimonies with detailed perceptions (lived experience) we found remarkable effects of the contents of the videos on the health of older adults. Third, although the team did not receive information from the participants or coordinators of the institutions that were part of the project about any case of injury or discomfort during the performance of physical exercises, we emphasize that this fact should be taken into account in future studies. We emphasize that it cannot be ruled out that frail older adults (i.e., physical or cognitive) may have problems understanding and following the sequence of movements, as well as suffering accidents and injuries while performing the exercises at home. Fourth, with the discovery of vaccines and the end of the lockdown (year 2021), the sharing of videos ended. Thus, it was not possible to keep in touch with users from distant regions to carry out a longitudinal follow-up. On the other hand, older U3A/UNIVASF students returned to face-to-face activities, and were all physically, emotionally, and cognitively assessed. In general, it was found that the vast majority attested to adequate performance levels in the evaluations.

5. Conclusions

The social isolation necessary to contain the spread of the COVID-19 pandemic has affected the physical and mental health of the older population worldwide. Our results showed that through the activities of the "U3A in Motion" program, it was possible to benefit the health and well-being of a considerable group of citizens while maintaining the confinement measures. The "U3A in Motion" program produced 82 videos on physical exercises and psychosocial dynamics, distributed through WhatsApp, YouTube, Instagram, and web pages. Consequently, the videos were watched by a considerable number of Brazilian older adults. Although different vaccines against COVID-19 have been developed and a large part of the older adult population is vaccinated, it is possible that new variants of the coronavirus will emerge, perhaps resulting in new periods of mandatory confinement. Thus, the findings of the present study can serve as a stimulus and basis for the creation of future projects or investigations in the area of telehealth and eHealth, with a focus on the older population.

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Data Availability Statement: The data presented in this study are available upon request from the corresponding author.

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References

1. IBGE-Brazilian Institute of Geography and Statistics. IBGE Releases Estimate of the Population of Municipalities for 2020. Available online: https://agenciadenoticias.ibge.gov.br/agencia-sala-de-imprensa/2013-agencia-de-noticias/releases/28668-ibge-divulga-estimativa-da-populacao-dos-municipios-para-2020 (accessed on 10 March 2023).
2. Brazil Ministry of Health Coronavirus Dashboard. Available online: https://covid.saude.gov.br/ (accessed on 10 February 2023).
3. Goethals, L.; Barth, N.; Guyot, J.; Hupin, D.; Celarier, T.; Bongue, B. Impact of Home Quarantine on Physical Activity Among Older Adults Living at Home During the COVID-19 Pandemic: Qualitative Interview Study. *JMIR Aging* **2020**, *3*, e19007. [CrossRef] [PubMed]
4. Lebrasseur, A.; Fortin-Bédard, N.; Lettre, J.; Raymond, E.; Bussières, E.-L.; Lapierre, N.; Faieta, J.; Vincent, C.; Duchesne, L.; Ouellet, M.-C.; et al. Impact of the COVID-19 Pandemic on Older Adults: Rapid Review. *JMIR Aging* **2021**, *4*, e26474. [CrossRef] [PubMed]
5. De Maio Nascimento, M.; da Silva Neto, H.R.; de Fátima Carreira Moreira Padovez, R.; Neves, V.R. Impacts of Social Isolation on the Physical and Mental Health of Older Adults During Quarantine: A Systematic Review. *Clin. Gerontol.* **2022**, 1–21. [CrossRef] [PubMed]
6. Xiong, J.; Lipsitz, O.; Nasri, F.; Lui, L.M.W.; Gill, H.; Phan, L.; Chen-Li, D.; Iacobucci, M.; Ho, R.; Majeed, A.; et al. Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *J. Affect. Disord.* **2020**, *277*, 55–64. [CrossRef]
7. Harridge, S.D.R.; Lazarus, N.R. Physical Activity, Aging, and Physiological Function. *Physiology* **2017**, *32*, 152–161. [CrossRef]
8. García-Esquinas, E.; Ortolá, R.; Gine-Vázquez, I.; Carnicero, J.A.; Mañas, A.; Lara, E.; Alvarez-Bustos, A.; Vicente-Rodriguez, G.; Sotos-Prieto, M.; Olaya, B.; et al. Changes in Health Behaviors, Mental and Physical Health among Older Adults under Severe Lockdown Restrictions during the COVID-19 Pandemic in Spain. *Int. J. Environ. Res. Public Health* **2021**, *18*, 7067. [CrossRef]
9. Makizako, H.; Nakai, Y.; Shiratsuchi, D.; Akanuma, T.; Yokoyama, K.; Matsuzaki-Kihara, Y.; Yoshida, H. Perceived declining physical and cognitive fitness during the COVID-19 state of emergency among community-dwelling Japanese old-old adults. *Geriatr. Gerontol. Int.* **2021**, *21*, 364–369. [CrossRef]
10. Ioannidis, J.P.A. Precision shielding for COVID-19: Metrics of assessment and feasibility of deployment. *BMJ Glob. Health* **2021**, *6*, e004614. [CrossRef]
11. Bailey, L.; Ward, M.; DiCosimo, A.; Baunta, S.; Cunningham, C.; Romero-Ortuno, R.; Kenny, R.A.; Purcell, R.; Lannon, R.; McCarroll, K.; et al. Physical and mental health of older people while cocooning during the COVID-19 pandemic. *QJM Int. J. Med.* **2021**, *114*, 648–653. [CrossRef]
12. Richardson, D.L.; Duncan, M.J.; Clarke, N.D.; Myers, T.D.; Tallis, J. The influence of COVID-19 measures in the United Kingdom on physical activity levels, perceived physical function and mood in older adults: A survey-based observational study. *J. Sports Sci.* **2021**, *39*, 887–899. [CrossRef]
13. Gustavsson, J.; Beckman, L. Compliance to Recommendations and Mental Health Consequences among Elderly in Sweden during the Initial Phase of the COVID-19 Pandemic—A Cross Sectional Online Survey. *Int. J. Environ. Res. Public Health* **2020**, *17*, 5380. [CrossRef] [PubMed]
14. Emerson, K.G. Coping with being cooped up: Social distancing during COVID-19 among 60+ in the United States. *Rev. Panam. Salud Pública* **2020**, *44*, 1. [CrossRef] [PubMed]
15. Mishra, R.; Park, C.; York, M.K.; Kunik, M.E.; Wung, S.-F.; Naik, A.D.; Najafi, B. Decrease in Mobility during the COVID-19 Pandemic and Its Association with Increase in Depression among Older Adults: A Longitudinal Remote Mobility Monitoring Using a Wearable Sensor. *Sensors* **2021**, *21*, 3090. [CrossRef] [PubMed]
16. Lage, A.; Carrapatoso, S.; de Queiroz Neto, E.S.; Gomes, S.; Soares-Miranda, L.; Bohn, L. Associations Between Depressive Symptoms and Physical Activity Intensity in an Older Adult Population During COVID-19 Lockdown. *Front. Psychol.* **2021**, *12*, 1680. [CrossRef]
17. Wong, F.H.C.; Liu, T.; Leung, D.K.Y.; Zhang, A.Y.; Au, W.S.H.; Kwok, W.W.; Shum, A.K.Y.; Wong, G.H.Y.; Lum, T.Y.-S. Consuming Information Related to COVID-19 on Social Media Among Older Adults and Its Association With Anxiety, Social Trust in Information, and COVID-Safe Behaviors: Cross-sectional Telephone Survey. *J. Med. Internet Res.* **2021**, *23*, e26570. [CrossRef] [PubMed]
18. Masaeli, N.; Farhadi, H. Prevalence of Internet-based addictive behaviors during COVID-19 pandemic: A systematic review. *J. Addict. Dis.* **2021**, *39*, 468–488. [CrossRef]

19. Chen, Y.-R.R.; Schulz, P.J. The Effect of Information Communication Technology Interventions on Reducing Social Isolation in the Elderly: A Systematic Review. *J. Med. Internet Res.* **2016**, *18*, e18. [CrossRef]
20. Di Giacomo, D.; Ranieri, J.; D'Amico, M.; Guerra, F.; Passafiume, D. Psychological Barriers to Digital Living in Older Adults: Computer Anxiety as Predictive Mechanism for Technophobia. *Behav. Sci.* **2019**, *9*, 96. [CrossRef]
21. Xi, W.; Zhang, X.; Ayalon, L. When less intergenerational closeness helps: The influence of intergenerational physical proximity and technology attributes on technophobia among older adults. *Comput. Human Behav.* **2022**, *131*, 107234. [CrossRef]
22. Nascimento, M.M. COVID-19: U3A students' report on the impacts of social isolation on physical and mental health and access to information about the virus during the pandemic. *Educ. Gerontol.* **2020**, *46*, 499–511. [CrossRef]
23. Duque, M.; Peres-Neto, L. Can older people stop sharing? An ethnographic study on fake news and active aging in Brazil. *Online Media Glob. Commun.* **2022**, *1*, 580–599. [CrossRef]
24. Sixsmith, A.; Horst, B.R.; Simeonov, D.; Mihailidis, A. Older People's Use of Digital Technology During the COVID-19 Pandemic. *Bull. Sci. Technol. Soc.* **2022**, *42*, 19–24. [CrossRef]
25. Haase, K.R.; Cosco, T.; Kervin, L.; Riadi, I.; O'Connell, M.E. Older Adults' Experiences With Using Technology for Socialization During the COVID-19 Pandemic: Cross-sectional Survey Study. *JMIR Aging* **2021**, *4*, e28010. [CrossRef]
26. Drazich, B.F.; Li, Q.; Perrin, N.A.; Szanton, S.L.; Lee, J.W.; Huang, C.-M.; Carlson, M.C.; Samuel, L.J.; Regier, N.G.; Rebok, G.W.; et al. The relationship between older adults' technology use, in-person engagement, and pandemic-related mental health. *Aging Ment. Health* **2023**, *27*, 156–165. [CrossRef] [PubMed]
27. World Health Organization (WHO). Stay Physically Active during Self-Quarantine. Available online: https://quarantrain.org/2020/03/18/who-stay-physically-active-during-self-quarantine/ (accessed on 28 February 2023).
28. Joseph, R.P.; Durant, N.H.; Benitez, T.J.; Pekmezi, D.W. Internet-Based Physical Activity Interventions. *Am. J. Lifestyle Med.* **2014**, *8*, 42–67. [CrossRef]
29. Kooij, L.; Groen, W.G.; van Harten, W.H. The Effectiveness of Information Technology-Supported Shared Care for Patients With Chronic Disease: A Systematic Review. *J. Med. Internet Res.* **2017**, *19*, e221. [CrossRef] [PubMed]
30. Vegting, I.L.; Schrijver, E.J.M.; Otten, R.H.J.; Nanayakkara, P.W.B. Internet programs targeting multiple lifestyle interventions in primary and secondary care are not superior to usual care alone in improving cardiovascular risk profile: A systematic review. *Eur. J. Intern. Med.* **2014**, *25*, 73–81. [CrossRef]
31. Bennett, G.G.; Herring, S.J.; Puleo, E.; Stein, E.K.; Emmons, K.M.; Gillman, M.W. Web-based Weight Loss in Primary Care: A Randomized Controlled Trial. *Obesity* **2010**, *18*, 308–313. [CrossRef]
32. Dwyer, M.J.; Pasini, M.; De Dominicis, S.; Righi, E. Physical activity: Benefits and challenges during the COVID-19 pandemic. *Scand. J. Med. Sci. Sports* **2020**, *30*, 1291–1294. [CrossRef]
33. Bagherian, S.; Ghahfarrokhi, M.M.; Banitalebi, E. Effect of the COVID-19 Pandemic on Interest in Home-Based Exercise: An Application of Digital Epidemiology. *Int. J. Epidemiol. Res.* **2021**, *8*, 47–53. [CrossRef]
34. Gould, C.E.; Hantke, N.C. Promoting Technology and Virtual Visits to Improve Older Adult Mental Health in the Face of COVID-19. *Am. J. Geriatr. Psychiatry* **2020**, *28*, 889–890. [CrossRef] [PubMed]
35. World Health Organization (WHO). *Guidelines on Physical Activity and Sedentary Behaviour*; World Health Organization (WHO): Geneva, Switzerland, 2020; ISBN 9781134470006.
36. Sasaki, S.; Sato, A.; Tanabe, Y.; Matsuoka, S.; Adachi, A.; Kayano, T.; Yamazaki, H.; Matsuno, Y.; Miyake, A.; Watanabe, T. Associations between Socioeconomic Status, Social Participation, and Physical Activity in Older People during the COVID-19 Pandemic: A Cross-Sectional Study in a Northern Japanese City. *Int. J. Environ. Res. Public Health* **2021**, *18*, 1477. [CrossRef] [PubMed]
37. Saraiva, M.D.; Apolinario, D.; Tavares, C.D.E.A.M.; Aliberti, M.J.R. Mobilility and Quality of Life During the COVID-19 Pandemic. *J. Nutr. Health Aging* **2020**, *25*, 440–447. [CrossRef]
38. Cohen-Mansfield, J.; Muff, A.; Meschiany, G.; Lev-Ari, S. Adequacy of Web-Based Activities as a Substitute for In-Person Activities for Older Persons During the COVID-19 Pandemic: Survey Study. *J. Med. Internet Res.* **2021**, *23*, e25848. [CrossRef] [PubMed]
39. Benvenuto, D.; Giovanetti, M.; Ciccozzi, A.; Spoto, S.; Angeletti, S.; Ciccozzi, M. The 2019-new coronavirus epidemic: Evidence for virus evolution. *J. Med. Virol.* **2020**, *92*, 455–459. [CrossRef] [PubMed]
40. Piret, J.; Boivin, G. Pandemics Throughout History. *Front. Microbiol.* **2021**, *11*, 631736. [CrossRef]
41. Morgan, O.W.; Abdelmalik, P.; Perez-Gutierrez, E.; Fall, I.S.; Kato, M.; Hamblion, E.; Matsui, T.; Nabeth, P.; Pebody, R.; Pukkila, J.; et al. How better pandemic and epidemic intelligence will prepare the world for future threats. *Nat. Med.* **2022**, *28*, 1526–1528. [CrossRef]
42. De Melo, G.C.; Duprat, I.P.; de Araújo, K.C.G.M.; Fischer, F.M.; Neto, R.A.D.A. Prediction of cumulative rate of COVID-19 deaths in Brazil: A modeling study. *Rev. Bras. Epidemiol.* **2020**, *23*, 1–11.
43. Da Cruz, R.R.; Beltrame, V.; Dallacosta, F.M. Aging and vulnerability: An analysis of 1062 elderly persons. *Rev. Bras. Geriatr. Gerontol.* **2019**, *22*. [CrossRef]
44. Souza, M.L.D.A.; Marques, T.V.; de Amorim, M.M.P. Vulnerability and incidence of covid-19 in Northeastregion of brazil through of the cluster analysis. *Hygeia Rev. Bras. Geogr. Médica Saúde* **2020**, *16*, 232–248.
45. Aung, M.N.; Yuasa, M.; Koyanagi, Y.; Aung, T.N.N.; Moolphate, S.; Matsumoto, H.; Yoshioka, T. Sustainable health promotion for the seniors during COVID-19 outbreak: A lesson from Tokyo. *J. Infect. Dev. Ctries.* **2020**, *14*, 328–331. [CrossRef] [PubMed]
46. Aspers, P.; Corte, U. What is Qualitative in Qualitative Research. *Qual. Sociol.* **2019**, *42*, 139–160. [CrossRef] [PubMed]

47. Rahman, M.S. The Advantages and Disadvantages of Using Qualitative and Quantitative Approaches and Methods in Language "Testing and Assessment" Research: A Literature Review. *J. Educ. Learn.* **2016**, *6*, 102. [CrossRef]
48. Nascimento, M.; Juchem, L.; Maduro, L. Active Living Program: Sports and leisure in health promotion and quality of life of seniors in Petrolina and Juazeiro, Brazil. *Rev. Bras. Ativ. Física Saúde* **2016**, *21*, 593–599. [CrossRef]
49. Tauben, D.J.; Langford, D.J.; Sturgeon, J.A.; Rundell, S.D.; Towle, C.; Bockman, C.; Nicholas, M. Optimizing telehealth pain care after COVID-19. *Pain* **2020**, *161*, 2437–2445. [CrossRef]
50. Vandelanotte, C.; Müller, A.M.; Short, C.E.; Hingle, M.; Nathan, N.; Williams, S.L.; Lopez, M.L.; Parekh, S.; Maher, C.A. Past, Present, and Future of eHealth and mHealth Research to Improve Physical Activity and Dietary Behaviors. *J. Nutr. Educ. Behav.* **2016**, *48*, 219–228.e1. [CrossRef]
51. Herbert, M.S.; Afari, N.; Liu, L.; Heppner, P.; Rutledge, T.; Williams, K.; Eraly, S.; VanBuskirk, K.; Nguyen, C.; Bondi, M.; et al. Telehealth Versus In-Person Acceptance and Commitment Therapy for Chronic Pain: A Randomized Noninferiority Trial. *J. Pain* **2017**, *18*, 200–211. [CrossRef]
52. Nascimento, M.M.; Giannouli, E. Active aging through the University of the Third Age: The Brazilian model. *Educ. Gerontol.* **2019**, *45*, 11–21. [CrossRef]
53. Rodriguez, A.; Smith, J. Phenomenology as a healthcare research method. *Evid. Based Nurs.* **2018**, *21*, 96–98. [CrossRef]
54. Cilesiz, S. A phenomenological approach to experiences with technology: Current state, promise, and future directions for research. *Educ. Technol. Res. Dev.* **2011**, *59*, 487–510. [CrossRef]
55. Gallagher, K.; Porock, D. The Use of Interviews in Q Methodology. *Nurs. Res.* **2010**, *59*, 295–300. [CrossRef] [PubMed]
56. Hammami, A.; Harrabi, B.; Mohr, M.; Krustrup, P. Physical activity and coronavirus disease 2019 (COVID-19): Specific recommendations for home-based physical training. *Manag. Sport Leis.* **2022**, *27*, 26–31. [CrossRef]
57. Polero, P.; Rebollo-Seco, C.; Adsuar, J.C.; Pérez-Gómez, J.; Rojo-Ramos, J.; Manzano-Redondo, F.; Garcia-Gordillo, M.Á.; Carlos-Vivas, J. Physical Activity Recommendations during COVID-19: Narrative Review. *Int. J. Environ. Res. Public Health* **2020**, *18*, 65. [CrossRef] [PubMed]
58. Jacobs, R.J.; Lou, J.Q.; Ownby, R.L.; Caballero, J. A systematic review of eHealth interventions to improve health literacy. *Health Inform. J.* **2016**, *22*, 81–98. [CrossRef]
59. Milne-Ives, M.; Lam, C.; De Cock, C.; Van Velthoven, M.H.; Meinert, E. Mobile Apps for Health Behavior Change in Physical Activity, Diet, Drug and Alcohol Use, and Mental Health: Systematic Review. *JMIR mHealth uHealth* **2020**, *8*, e17046. [CrossRef]
60. Marchant, G.; Bonaiuto, F.; Bonaiuto, M.; Descas, E.G. Exercise and Physical Activity eHealth in COVID-19 Pandemic: A Cross-Sectional Study of Effects on Motivations, Behavior Change Mechanisms, and Behavior. *Front. Psychol.* **2021**, *12*, 618362. [CrossRef]
61. Constantinou, D.; Torres, G.; Neophytou, N.; Fourie, P.; Buntting, X.; Gradidge, P. 'I'm doing it for myself': Using a smartphone-based exercise service during the COVID-19 lockdown in the Faculty of Health Sciences, University of the Witwatersrand, South Africa. *South Afr. J. Sport. Med.* **2021**, *33*, 1–6. [CrossRef]
62. Sachser, C.; Olaru, G.; Pfeiffer, E.; Brähler, E.; Clemens, V.; Rassenhofer, M.; Witt, A.; Fegert, J.M. The immediate impact of lockdown measures on mental health and couples' relationships during the COVID-19 pandemic—Results of a representative population survey in Germany. *Soc. Sci. Med.* **2021**, *278*, 113954. [CrossRef]
63. Lahariya, C. 'Ayushman Bharat' Program and Universal Health Coverage in India. *Indian Pediatr.* **2018**, *55*, 495–506. [CrossRef]
64. Lahariya, C. Health & Wellness Centers to Strengthen Primary Health Care in India: Concept, Progress and Ways Forward. *Indian J. Pediatr.* **2020**, *87*, 916–929. [CrossRef]
65. Bitton, A.; Fifield, J.; Ratcliffe, H.; Karlage, A.; Wang, H.; Veillard, J.H.; Schwarz, D.; Hirschhorn, L.R. Primary healthcare system performance in low-income and middle-income countries: A scoping review of the evidence from 2010 to 2017. *BMJ Glob. Health* **2019**, *4*, e001551. [CrossRef] [PubMed]
66. Vande Maele, N.; Xu, K.; Soucat, A.; Fleisher, L.; Aranguren, M.; Wang, H. Measuring primary healthcare expenditure in low-income and lower middle-income countries. *BMJ Glob. Health* **2019**, *4*, e001497. [CrossRef] [PubMed]