



Older persons' expressed perceptions on exercise programs in long-term care institutions: Influence of professionals and institutions

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ABSTRACT

Objective: To explore the perceptions of institutionalised older people about the professionals and institutions regarding exercise programs in long-term care institutions

Design, setting, and participants: A qualitative study was carried out using focus group discussions. Forty-seven institutionalised participants (≥ 65 years old) with a score of > 23 in the Mini-Mental State Examination (MMSE) were recruited.

Results: Most participants believed that the frequency of the exercise sessions could be increased by enhancing the number of staff assisting them and by adapting the facilities to their needs. They also suggested using outdoor spaces and avoiding childish activities and treatment. Participants' beliefs were grouped into three major themes (i) Perceptions about the health professionals delivering the exercise programs (ii) Perceptions about the institution or centre regarding exercise programs; (iii) Perceptions about the exercise programs.

Conclusion: Participants proposed certain changes that could take place in the institutions to promote engagement with exercise programs: tailored exercise programs, avoiding puerile treatment, increasing the number of staff members, and the creation of well-equipped spaces to perform the exercise.

Practical implications: Professionals should spend time designing tailored exercise programs and avoid puerile treatment. Institutions must review the need for spaces and the personnel assigned.

1. Introduction

Physical exercise has been postulated as one of the keys to optimise quality aging and has been shown to improve the physical condition and quality of life of institutionalised people [1]. Its benefits for improving diseases such as hypertension, diabetes, osteoporosis and even mental disorders are now almost axiomatic [2]. Exercise not only improves current pathologies but also plays an important role in the prevention of diseases and other events such as falls, which are commonplace in the population of institutionalised older adults [3]. The policies followed by the institutions usually recommend the inclusion of exercise programs for residents, since they are aware of its benefits [4]. However, the level of physical exercise among institutionalised older people remains low [5]. It is unknown to what extent institution managers consider certain

factors perceived by older people which could improve the use of this resource.

Commonly, exercise programs, based on strength, flexibility, coordination, and balance movements, are performed in institutions as part of older people's routines [6]. The professionals in charge of carrying out exercise-related activities are usually physiotherapists, as experts in exercise and movement, but also occupational therapists [7–9]. A study directly relates physiotherapists and occupational therapists in nursing homes to the quality of care [10].

Although the health professionals are a crucial component in the proper functioning of exercise programs, the institutions also may influence the success of such programs. There are studies on the perspectives of administrators in relation to exercise programs or on barriers and facilitators that could influence the development of

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exercise, but it is still not known how institutionalised older people view the health professionals who direct the activities and how institutions can favour the performance of exercise programs [9,11].

Therefore, the objective of this study was to explore the perceptions of institutionalised older people about the professionals and institutions regarding exercise programs in long-term care institutions (LTC).

2. Methods

2.1. Design

A qualitative study was conducted following the CONSolidated criteria for REporting Qualitative research (COREQ) [12]. The focus group technique was used to gain an in-depth understanding of the issue. Previously, ethical approval was received from the local ethics committee (ID: 2408/2019 University of Murcia Research Ethics Committee).

The participants were informed about the study and reassured about the confidentiality in advance. They provided demographic information and signed an informed consent form to confirm their willingness to participate.

2.2. Participants

A sample of older people living in LTC institutions in the south-east of Spain was recruited. The health professionals of the institutions identified and invited users to participate in the study. If users expressed interest, the interviewer contacted them and offered additional information about the study. Participants over 65 years old, with a score of 23 or higher in the Mini-Mental State Examination (MMSE), were eligible for the study [13,14]. Participants with communication issues were excluded. The focus group technique was carried out until data saturation was reached. A total of ten focus groups were held, 5 with men and 5 with women. Participants also received written and verbal information of the study and ethical considerations before the study.

2.3. Data collection and analysis

Two female researchers, both university professors in health sciences and experts in qualitative research, conducted the focus groups. None of the authors knew any of the participants prior to the study. The interviewers did not report any characteristics or interests that could affect the research. Prior to the focus groups, participants were informed by interviewers about their workplaces and the purposes of the focus groups. A question guide was created based on a review of the literature in this area. (Table 1).

The focus group sessions lasted approximately 30–40 min. During the focus groups, only the participants and the researchers were present. The sessions were recorded with an audio recorder and written notes were made, both of which were used for data collection. Sessions were

then transcribed verbatim. The Atlas.ti v.9.1.5 qualitative analysis software (ATLAS.ti Scientific Software Development GmbH) program was used to manage data [15]. Each participant was assigned an alphanumeric code to incorporate it into the data. The analysis process was carried out following these steps:

First, an initial reading of all the transcripts was made to obtain a general idea of the contents; second, the most significant phrases were selected and finally, the themes and sub-themes were generated. To develop these phases, the modified grounded theory was used [16,17].

Three researchers independently coded the transcripts and the significant sentences. This process was performed until saturation of information was achieved, at which point no more information was extracted from the focus groups.

Subsequently, the sentences were divided into categories and finally, the categories were organised into themes and subthemes. The research team held discussions to reach a consensus and thereby improve the reliability of the results. The participants were unable to comment or provide feedback on the findings during the COVID-19 pandemic due to lockdown restrictions that prevented access to LTC facilities.

3. Results

3.1. Participant Characteristics

The study sample consisted of 47 participants. This included 28 women with a mean age of **83** years (SD=9.22) and 19 men with a mean age of **76** years (SD=8.18). No subjects dropped out of the study. A total of 16 women (**57 %**) and 6 (**32 %**) men used a wheelchair, walker, or other assistive device.

3.2. Themes

There were three major themes that emerged from the analysis of the focus groups: 1) Perceptions about the health professionals delivering the exercise programs 2) Perceptions about the institution or centre regarding exercise programs, and 3) Perceptions about the exercise programs. The quotes supporting the themes are included in Table 2.

3.2.1. Perceptions about the health professionals delivering the exercise programs

The professionals in charge of developing the exercise programs were usually physiotherapists; however, in some institutions, sessions were also led by occupational therapists, psychologists or nursing assistants. There was usually a single therapist in charge of supervising the exercise group, however, if the group was very large, sometimes there were two professionals.

In general, participants' perceptions about their instructors were positive, but there was also a diversity of opinions in this regard. Within this theme, the following sub-themes were identified: professionalism, available time and treatment and support.

3.2.1.1. Professionalism. Most of the participants thought that the instructor was very knowledgeable in the field and in directing exercise. They felt that the professionals had a good knowledge of how to carry out their work, which made them rely heavily on the instructor.

3.2.1.2. Available time. Sometimes the exercise sessions lasted less than planned. For the participants, this was because the instructor's available time was limited because they had many tasks to do. They also thought that when they performed group exercise there were too many people, and the individualised attention was reduced.

3.2.1.3. Treatment and support. The residents were satisfied by the treatment received by their instructors and considered that they were kind and trusted. However, various participants perceived that the

Table 1

Focus groups questions.

- Do you perform exercise at the centre?
- What kind of exercise do you perform?
- How many times a week do you do exercise sessions?
- How long does the session last?
- Do you do individual exercise or group exercise? / How do you perform the exercise?
- Where do you perform the exercise?
- Do you like to do exercise there? What would you like to change regarding the place?
- How many instructors lead the activity?
- What do you think about the instructor who guides your exercise?
- What other types of exercise or activity would you like to do and are not currently doing?
- Do you want to add anything else that has not been asked?

Table 2

Themes.

Themes	Subthemes	Patients' statements
Perceptions about the health professionals delivering the exercise programs	Professionalism	"The physiotherapist who instructs us knows a lot about exercise, and she teaches it very well"(female, 79).
	Available time	"The instructor who teaches us the exercises is sometimes in a hurry and the service leaves much to be desired"(male, 79).
	Treatment and support	"I think my physiotherapist is very kind and nice, almost like a friend"(male, 85). "Sometimes they treat us as if we were children and make us do very childish activities"(male 68).
Perceptions about the institution or centre regarding exercise programs	Facilities	
	Lack of space	"The truth is that the place where we do the exercises is very small and we have to adapt"(female, 94) "We miss going out in the garden. I would like to do outdoor exercises"(female, 74)
	Materials	"There are materials for us to exercise, but they could fix them because they are deteriorated, and we cannot use them" (female, 79). "There is nothing here for us to exercise on our own, there is a lack of equipment"(male, 67) "They should renew the existing materials. But not only renew them, because they bought a new exercise bike and nobody can use it because they can't ride it, it's not adapted"(female, 65).
	Staff	"I would like to walk more or exercise more, but I can't do it alone, and many times I can't be accompanied because there isn't enough staff"(female, 89) "The staff is often unable to help us because they have too much work to do, they are very busy and there are too few of them"(female,83).
	Need for new ideas/Students	"When the students come, we can do something extra because they help the physiotherapists"(female, 72). "We enjoy when students come because we do new exercises and they always come up with new ideas"(female, 89).
	Organization	
	Supervision	"I can go around and go out of the residence on my own because I can walk, but not everyone can go out"(male, 69).
	Timing	"The exercise sessions usually last about an hour, but of course, that includes the transfer from our rooms to the exercise room, so the exercise time is actually shorter"(male, 67).
	Mandatory nature	"The staff decides who can participate in the exercise program"(female, 74). "It is not mandatory to exercise, only those who want to participate do so"(male, 79). "We are on a list to exercise and every day, whether you want to or not, they pick you up from your room and take you to exercise" (male, 68).
Perceptions about the exercise programs	Dosage	"The problem I find is that during the weekend we are unoccupied, and we don't really know what to

Table 2 (continued)

Themes	Subthemes	Patients' statements
		do, I try to do exercise on my own, but it isn't the same. That's what I miss"(male, 85). "I like to be active and not sitting around all day doing nothing. I need to move around and do some activity, especially on weekends. "(female, 83). "I would like to exercise more often"(male,83).
	Contents	"The exercise we do consists of moving the arms, legs and hands"(female, 74). "We all exercise sitting down"(female, 79). "In addition to the exercises, we always play games with songs"(male, 69).
	Activity guidance	"The instructor teaches us the exercises and we repeat them"(male, 65). "The exercise group is very large, around 20 people, and just one instructor" (female, 79) "There is a person who teaches us the exercises, but as there are many of us, they cannot always attend to us and correct us all"(male, 67). "In my room, sometimes, I try to do exercises on my own, I move my arms and legs"(female, 79).

health professionals tended to infantilise them, by performing certain activities that they considered childish.

3.2.2. Perceptions about the institution or centre regarding exercise programs

The opinions that the participants had about their institutions and how they could perform exercise programs at the institution were varied.

3.2.2.1. Facilities

3.2.2.1.1. Lack of space. At most centres the exercise sessions were held in multi-purpose rooms or in the dining rooms, and in some of them, in the physiotherapy gyms. These rooms were usually large enough to accommodate many participants in each session. However, not all of them were well-equipped to perform the exercise comfortably. Moreover, the exercise was rarely carried out in outdoor spaces.

They also highlighted the lack of spaces. They considered that having larger spaces both indoors and outdoors could promote the performance of all kinds of activities, both basic, such as walking, and leisure activities.

3.2.2.1.2. Materials. The participants also expressed the need to renew the materials and to adapt the ones that they already had for the correct performance of the activities. For example, an institution bought a new stationary bicycle, however not all the subjects were able to mount it.

3.2.2.2. Staff members. The lack of staff members was an issue that arose repeatedly in the focus groups. Usually, participants felt that they almost always had to wait for someone to be available to assist them, during almost all types of activities. This was much more evident in those subjects who were dependent on a third person or those who needed supervision. For example, they were unable to go for a walk whenever they wanted to because they had to wait for a person to go with them.

This lack of staff members also affected exercise programs. Although the exercise sessions were supposed to last approximately one hour, this hour sometimes included the transportation of the users to the exercise

room, resulting in shorter sessions. Furthermore, various participants expressed that the duration of the session depended on if the instructor had to do any other task.

Regarding the staff attitudes, most participants perceived them as charming and caring. However, not all the participants felt this way. Some subjects perceived a lack of assistance from staff members. These subjects stated that sometimes when they required the staff members for some tasks, they had to wait for a long time and sometimes they were even forgotten.

3.2.2.1. Need for new ideas/Students. The incorporation of students who were on their clinical placements was a relief for the participants since they felt they could do more activities than usual. They also felt better supervised during the exercise program and for going for a walk when the students were there because a single instructor was not enough for a large group.

Some participants stated that the students brought fresh ideas and more variety of contents of the exercise programs. This motivated them to attend the program and continue exercising.

3.2.2.3. Organization

3.2.2.3.1. Supervision. The freedom that participants have at the centre for doing different activities is linked to the functional status of the subject: the higher the functionality, the greater the freedom. Thus, many subjects who had the ability to walk independently also had more options to choose to go out around the centre or even to leave the centre. However, those who required supervision or needed a third person to get around were more limited.

3.2.2.4. Mandatory nature. Exercise was not mandatory and not all users participated in the exercise programs. The staff members normally select users who can participate in relation to their functional status.

Some participants stated that once they were selected, the health professionals encouraged the subjects to participate in the exercise program, for example by picking them up from their rooms. However, participants had varying perceptions of the mandatory nature of the exercise programs.

3.2.3. Perceptions about the exercise programs

The exercise programs in the institutions shared similar characteristics. They were performed in groups, in sessions lasting approximately one hour and were held in a multipurpose room or the dining room. However, certain differences were also found, such as the number of participants in the groups, ranging between 20 and 50 people, or the frequency of the sessions. Within this theme, several sub-themes were identified: dosage, content, and activity guidance.

3.2.3.1. Dosage. In general, the exercise sessions lasted one hour and were performed from one to five times a week. However, the participants stated that the duration of the session depended on the time the activity instructor had available.

In addition, these sessions were usually distributed in the morning and some subjects felt that the rest of the day was long, boring, and very sedentary. Nevertheless, other participants stated that they did not have time to be bored.

Moreover, the activity ceased on weekends. In this regard, some participants felt that it was necessary to increase the number of exercise sessions per week, including weekends, as they felt they did too little exercise and after the weekend they felt sluggish.

3.2.3.2. Contents. Regardless of the participants' functionality, the exercise was performed in a seated position, either in the users' own wheelchairs or in chairs provided by the centre. Only at one centre part of the exercise session was performed in a standing position and part of the session was seated. The type of exercise was the same for all subjects, and usually consisted of mobility exercises, and strength and

coordination, mainly involving the upper limbs. Furthermore, at some centres, the participants also played games with hoops, balls, and music.

Although in general the participants liked the exercise they performed, some participants found the activities too simple and were eager to increase the difficulty or even include new sport activities. Nonetheless, the activity they requested the most was walking.

3.2.3.3. Activity guidance. Sometimes the exercise was fully directed. In other cases, some residents were allowed enter the physiotherapy gym, where equipment is available for exercise. In these cases, they were allowed to use the equipment (dumbbells, exercise bike,) and exercise on their own and unsupervised.

4. Discussion and conclusion

4.1. Discussion

Physical exercise is one of the activities that has the greatest impact on the health and quality of life of institutionalised older people. All the centres that participated in our study had physical exercise programs. However, the participants perceived deficiencies in these programs, which may be due to the interrelation of different factors, regarding the programs, the institutions, and the health professionals who run the programs.

Regarding the institutions, the lack of staff members is a recurring problem [18]. This could have a negative influence on exercise, for example by reducing the number of weekly doses of exercise.

A low frequency of exercise is a deficiency that has been previously identified in other studies [19–22]. In our study, lack of staff was also related to the duration of sessions and to the reduction of fundamental activities such as walking. The latter complaint was mainly stated by residents who need supervision. Furthermore, our participants wanted to increase the frequency of sessions not only for exercising but to remain occupied throughout the day. These findings have also been reported previously, and it is a very important point since boredom and monotony are common perceptions of people living in LTC institutions [20,23].

Moreover, the participants liked exercising in a group to socialize and have fun. However, the groups were too large and directed just by one or two health professionals. The residents mentioned that they usually performed the exercises in a seated position, even though they were able to stand and walk. They also requested new ideas and types of exercises and increased staff members. Possibly, the fact that the groups are so big, and they are directed by a single professional may reduce the variability and intensity of exercises, in favour of prevention of falls and safety. Moreover, if the number of participants per group were reduced, the frequency of exercising would also be reduced, due to a lack of staff members [24].

Considering these interrelations, the lack of professionals directing the exercise programs is a key factor in these types of centres since it affects the time dedicated to this activity. Understanding that exercise is fundamental for health and wellbeing, this lack of staff may ultimately translate into a decrease in activity and quality of life. In fact, in line with literature [6], our participants positively valued the presence of students. They stated that with the students they could exercise longer and perform new and varied activities, and this kept the participants motivated to continue exercising [6]. Moreover, as mentioned in the results, most of the groups were very large, which makes it even more difficult to supervise the exercise. This also makes it more difficult to perform the exercise in a standing position, so most of the participants performed the exercise in a seated position. Which it is the contrary to best practice to achieve optimal results from exercise, even for relatively frail older people [25]. This need of support and supervision among the population of older institutionalised people challenges the balance between the health recommendations, the residents' desires of physical

exercise, and the capacity of institutions and professionals to respond to these demands and needs.

Regarding the facilities, the participants generally considered that the spaces were not tailored for their needs. For example, they lacked large indoor and outdoor spaces to go for a walk [24,26]. In addition, they usually performed exercise in dining rooms or multipurpose rooms.

The creation of residential-type common spaces, walking corridors with activity spaces, gardens, and non-slip walkways should also be considered to enhance and promote exercise when designing LTC institutions. Institutions could also engage in partnerships with sport facilities or swimming pools so that older adults can exercise there [27].

In line with the literature, the health professionals in charge of exercising were mainly physiotherapists. Their role in LTC institutions is well described [28]. They are in charge of maintaining functional status and improving quality of life of the users [29]. To achieve this, they include active exercise in their sessions, postural training, gait, and balance training and falls prevention. Previous studies in older people show the importance of directed exercise compared to exercise performed at home or self-initiated exercise [30]. Besides, physiotherapists also play an important role in exercise adherence since they generally design the type of exercise to perform in the programs. Some participants of our study considered that the exercise was not challenging or motivating enough whereas it is known that tailored exercise programs that include users' preferences can encourage participation [30]. In addition, the way in which the instructor conducts the activity may also influence participant's engagement in the exercise program [31]. Thus, overall, the participants of our study felt happy and satisfied with the health professional who directed the program. Nevertheless, some participants sometimes perceived a childish treatment, especially when playing some activities, which they found very easy. This is a mistake that some people make with older people, as seen in previous studies with people with dementia [32]. In addition, in order to increase self-reported physical activity in older adults, it has been recommended that physiotherapists add behaviour change techniques to interventions [33].

The participants of our study valued professionals who demonstrated competence and knowledge in exercise performance. They appreciated professionals who had a good understanding of their specific needs associated with aging. They valued regular scheduling, compliance with planned activities, and the presence of professionals for sufficient time to accompany and direct them during the exercise. Furthermore, they considered that certain changes could be made in relation to the staff and the institutions to improve the exercise programs. Their main proposals were to increase the number of health staff directing the exercise programs and assisting them, to adapt the facilities and programs to their needs and to avoid childish activities and treatment. These are important findings that should be considered by the professionals and centres that organise the exercise programs to increase the participation. Professionals and institutions may also act as advocates for changes in laws and regulations focusing on the enhancement of active-living attitudes amongst older adults living in LTC institutions.

Additionally, this study has several limitations. First, the focus group sessions were conducted at the same LTC institutions where the residents lived. Second, recruitment of very disabled or inactive residents was very complicated. Finally, socioeconomic data and functional status of the participants were not included in the study.

4.2. Conclusion

The perceptions of the participants of our study about the health professionals and the institutions regarding the exercise programs, suggest that some changes could be made to promote exercise engagement. For example, the creation of specific and well-equipped spaces to perform exercise. Additionally, fresh ideas and tailored exercise could motivate users to exercise. Furthermore, increasing the health staff-to-user ratio could increase the frequency and duration of exercise

sessions and the performance of new physical activities. Also, the professional treatment could influence exercise engagement since they sometimes felt treated as children. These proposals should be considered by health staff and the institutional management bodies to enhance exercise.

4.3. Practice implications

Older people living in long-term care institutions perceive that some aspects could be improved to promote their engagement to exercise programs. They demand more activity, such as walking more, a higher number of physiotherapists and other staff members to meet these needs, and more availability on behalf of the instructors. Moreover, fresh ideas are needed to motivate participation while avoiding childish treatment and puerile activities. Also, the facilities need to adapt spaces to perform indoor and outdoor exercises. These factors should be considered by policies, institutions, and physiotherapists in order to enhance and promote exercise.

Informed consent and patient details

We confirm all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story.

Ethical approval

The University of Murcia Ethics Committee approved this study. All participants gave written informed consent before data collection began.

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CRedit authorship contribution statement

Salud Poveda-López, Carmen Lillo-Navarro and Joaquina Montilla-Herrador took part in the study design, data collection, data analysis and preparation of this manuscript. Alicia Sánchez-Pérez and Mariano Gacto-Sánchez collected and analysed the data and text revisions. All authors read and approved the final version of the manuscript.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. The authors declare no conflict of interest.

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