Exercise class participation among residents in low-level residential aged care could be enhanced: a qualitative study

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Question: What do residents in low-level residential care perceive as motivators and barriers to participating in exercise classes at the facility? **Design**: Qualitative study using focus groups. **Participants**: Residents, nursing staff and allied health staff of a low-level residential care facility. **Results**: Key motivators for residents to attend the exercise classes included personal benefits, such as improved health and opportunities to socialise, and the support and encouragement that they received from family members and health professionals. The barriers to participating in the exercise classes included: health issues like pain, incontinence, and hearing impairments; external constraints such as the location of the classes and the early morning time; and internal constraints associated with a lack of knowledge about the classes and the benefits of exercising. While the key themes that arose from this study are consistent with findings from studies of community-dwelling adults, several of the barrier subthemes were unique. **Conclusion**: Recommendations from our findings to enhance exercise class participation include careful consideration of: class scheduling; class location; social aspects associated with exercise classes; support of social networks and health providers; health issues perceived to limit exercise; and marketing of classes. **[Guerin M, Mackintosh S, Fryer C (2008) Exercise class participation among residents in low-level residential aged care could be enhanced: a qualitative study. *Australian Journal of Physiotherapy* 54: 111–117]**

Key words: Exercise, Aged, Qualitative Research, Physiotherapy

Introduction

For older people living in residential care, regular exercise can reduce activity limitations (Eggermont and Scherder 2006, Fiatarone et al 1994, Rolland et al 2007, Rosendahl et al 2006), maximise independence (Eggermont and Scherder 2006, Rolland et al 2007, Rosendahl et al 2006), slow the progression of dementia (Stevens and Killeen 2006, Rolland et al 2007), promote sleep (Koch et al 2006), and enhance quality of life and well-being (Eggermont and Scherder 2006, Kell et al 2001). Therefore, it is important for regular exercise to be promoted successfully in residential care to encourage residents to participate in the available exercise and physical activity options. This may be especially important for residents who are relatively independent with greater autonomy in how they manage their day, such as older people residing in hostel, also known as low-level care, accommodation.

A number of motivators and barriers have been shown to influence exercise participation by older adults living in the community (Brittain 2002, Mota et al 2007, Newson and Kemps 2007, Sallis et al 1992, Wilcox et al 2006). These motivators can be loosely divided into three categories:

1. Improved health, such as feeling physically better, wanting to stay in shape;
2. Support/advice from peers and health professionals; and
3. Environmental factors, like exercise facilities within close proximity, affordable facilities, and the presence of instructors to provide guidance.

The perceived barriers for community-dwelling older adults to exercise can be identified under five categories:

1. Health issues, like illness and disability;
2. Lack of knowledge, such as the perception you do not need to exercise when you are older;
3. Psychological factors such as fear of pain or falling;
4. Environmental factors, including unsafe exercise environments, transport issues or poor weather; and
5. Poor motivation to exercise, for example laziness and lack of self-discipline.

To date, no study has explored the specific motivators and barriers to exercise for older adults living in low-level residential care. Thus the research question for this study was:

> What do residents in low-level residential care perceive as motivators and barriers to participating in exercise classes at the facility?

The aim was to formulate recommendations which would increase exercise class participation by older adults living in low level residential care.

Method

Design

An exploration of motivators and barriers to exercise class participation was undertaken using focus groups with residents and health care workers of a low-level care residential facility. Focus groups were employed to

encourage participants to explore the issues important to them in their own language (Rice and Ezzy 1999). The theoretical perspective of interpretivism was selected to enable participants' accounts of the exercise classes and experiences to be gathered in order to understand how it was experienced and understood by those directly affected (Schwandt 2000). An epistemology of social constructionism, recognising that a person's world and reality is created through the process of 'social exchange' (Schwandt 2000), was chosen as the various stakeholders were likely to express different ideas and views depending on their role and involvement in the exercise classes.

At the study facility, exercise classes for the low-level care residents were offered onsite, twice a week (9.30 am Tuesdays and 11.00 am Thursdays). Classes were based on the Easy Moves for Active Ageing (EMAA) Program, a predominantly chair-based exercise program (Active Ageing Australia 2007), designed by a physiotherapist to assist the maintenance of function and prevent the physical decline of older people; especially those residing in residential aged care. All classes at the study facility were supervised by physiotherapy assistants trained in exercise class leadership and EMAA.

Focus groups were conducted separately with each group of stakeholders to provide an optimal group size of six to eight participants and to ensure that each group was relatively homogenous (Rice and Ezzy 1999). The initial focus group was conducted with the residents, as their voice was the most significant indicator of motivators and barriers to exercise class participation. The subsequent focus groups with other stakeholders involved in the exercise classes (nurses/carers and therapists) provided different views on motivators and barriers and highlighted discrepancies between the ideas and opinions of the various stakeholders.

The investigators in this study were all from a physiotherapy background: a physiotherapy honours student, a physiotherapist in academia with experience and an interest in aged care, and a senior physiotherapist working in an aged care setting. The student, with no affiliation to the study facility, acted as facilitator for the focus groups, and an independent physiotherapy investigator acted as scribe, noting group dynamics, body language, and key ideas. These were later noted alongside the transcripts, increasing the depth and credibility of data collection and triangulating data sources. Focus groups were audiotaped and the tapes transcribed verbatim after each session. Group discussion was generated using a sequence of open-ended questions (Box 1) based on motivators and barriers to exercise amongst community-dwelling adults. All questions were piloted with an older adult or senior physiotherapist prior to use in the focus groups.

Approval for the study was granted by the Divisional Ethics Committee of the University of South Australia and the Board of Lutheran Homes Incorporated. All participants provided written informed consent.

Participants

Participants were drawn from a low-level residential care facility in a metropolitan area. In Australia, low-level care, also known as hostel care, provides care for older people who need some help, but who do not have very complex ongoing care needs (Department of Health and Ageing 2007). Ten residents were invited by letter to participate in the study using purposive sampling in which information-rich participants were sought (Morgan 1998, Patton 1990). All nurses and carers working with low level care residents, and all physiotherapists, occupational therapists, and therapy aides were invited by letter to participate in the study.

Box 1. Focus group questions.

Residents focus group

- What does it mean to be healthy?
- When you think about the exercise classes, what comes to mind?
- Are there benefits of participating in the exercise classes? If so, what are they?
- Why do you think some of the residents go to the exercise classes?
- What do you think prevents some of the residents from participating in the exercise classes?
- Are there changes you would make to the exercise classes to encourage greater participation?

Staff* focus group

- What do you think are the benefits of the exercise classes for the residents?
- Why do you think some of the residents at this village participate in the exercise classes?
- Why do you think some of the residents at this village do not participate in the exercise classes?
- What do you see are the physical barriers preventing some of the residents attending the exercise classes?
- What do you think are the perceived barriers by the residents, which prevent then from attending the exercise classes?
- Are there any changes you would make to the exercise classes in order to encourage more residents to attend?
- Do you as staff members think you are informed enough about the exercise classes?
- What type of information about the exercise classes would you like? What format would you like this to be in?

* = nurses and therapists group

Data analysis

Data were examined using thematic analysis (Rice and Ezzy 1999). To assist in developing a fuller, more complex picture, and to enhance credibility, the data were analysed independently by two investigators (SM, MG). An inter-coder agreement study was conducted with a high agreement score of 94% achieved. There were no major discrepancies between the two investigators' findings.

A 'coding and categorisation' process developed themes, subthemes, and categories of coded statements from the data (Rice and Ezzy 1999). 'Coding' began after each focus group and involved several readings of the transcripts to identify important ideas and patterns of information in the data to create a list of key concepts. Emerging issues and points of contention were taken to subsequent focus groups for further exploration and clarification. For example, it became apparent from the residents' focus group that issues around health problems, bodily functions, timing, and location of the classes were all impacting on

Table 1. Characteristics of the three focus groups.

	Residents n = 7*	Nurses n = 8	Therapists n = 8
Female n (%)	7 (100)	8 (100)	6 (75)
Years at facility, mean (SD)	13.5 (4.3)	4.9 (1.2)	9.0 (1.6)

* = 4 residents attended exercise classes at the time of the research

their ability to attend the exercise classes. These prompts were incorporated into subsequent staff focus groups if the issues were not raised. 'Categorising' of the data involved grouping similar concepts to create subthemes. The final step was to review the subthemes and draw them together to form themes (Rice and Ezzy 1999). After the data had been analysed individually for each focus group, data from the three groups were compared to identify which findings were exclusive to a particular group and which were common to all groups. The themes generated from the analysis were taken back to a selection of the residents and therapists from the focus groups for validation.

Results

Participants

Twenty-three participants were involved in this study. Seven of the ten residents invited to participate took part in one focus group (residents group) (Table 1). Only female residents agreed to participate, however at the time of this study 67 of the 69 residents were female. Five nurses and three carers were recruited for a second focus group (nurses group) (Table 1). Two physiotherapists, two physiotherapy assistants, one occupational therapist, and three occupational therapy assistants were recruited for a third focus group (therapists group).

Motivators to exercise class participation

'Personal benefits' and 'Support and encouragement' emerged as facilitator themes from all three focus groups, and 'Personal characteristics' was highlighted as a third theme by both staff focus groups (Box 2).

Personal benefits: All focus groups considered the physical benefits of maintaining or improving physical independence and mobility as important reasons for exercise class participation:

> *Helps keep you moving. (Resident)*

> *They [the residents] want to stay able, they want to stay mobile, they can see the benefits and acknowledge that. (Therapist)*

The social benefits of interaction between residents and reduced feelings of isolation were also perceived as strong motivators by all groups:

> *Sometimes it does you good to go to the exercise classes because you meet someone to talk to. (Resident)*

Support and encouragement: The residents group thought that support and advice from family members was an important motivator to attend exercise classes:

Box 2. Summary of motivators to exercise class participation.

Theme: Personal benefits	
Subthemes	**Categories of coded statements**
Physical benefits	Maintain or improve independence[RNT]
	Maintain range of movement[R]
	Maintain or improve mobility[NT]
	Maintain fitness[NT]
	Means of continuing their previous active life[T]
Social benefits	Interact with other residents[RNT]
	Prevent isolation[R]
	Able to show off abilities[N]
Theme: Support/encouragement	
Subthemes	**Categories of coded statements**
Family support	Grandchildren's support[R]
Staff support	Nurses' and carers' support[N]
	Medical practitioners' advice and support[NT]
	Physiotherapy staff encouragement[T]
Theme: Personal characteristics	
Subthemes	**Categories of coded statements**
Previous lifestyle	Previous active lives[N]
	Previous physiotherapy experience[N]
Cognitive functioning	'Good' cognitive functioning [N]
Personality type	Self-motivated to exercise[NT]
	Social personality types[T]

R = identified by residents focus group; N = identified by nurses focus group; T = identified by therapists focus group

> *My grandson in WA is frightened that I might lose the use of my limbs… (Resident)*

While the staff focus groups considered advice and reminders from health professionals as a strong motivator:

> *Many of the residents who do come have been encouraged to come by the physiotherapists. (Therapist)*

Personal characteristics: Both staff focus groups identified personal characteristics they believed to be key motivators for residents to participate in the exercise classes. Interestingly, this theme was not acknowledged by the residents focus group. The nurses group suggested that residents with previously active lifestyles and those with good cognitive functioning were more motivated to attend:

> *They have been active all their lives (Nurse), and*

> *Their cognitive skills play a major part, those who have not got dementia still want to be quite active. (Nurse)*

A sociable personality was identified by the therapists group as a facilitator:

They're a lot more open and socially active people, the ones I'm thinking of that come twice a week, every week pretty much. (Therapist)

Both staff groups mentioned that some residents have very self-motivated personality types and despite health problems they often still attended the exercise classes:

More likely to come up and talk to you before or after the class and tell you their knee is sore, so if you don't see me doing as much today that is why. (Therapist)

Barriers to exercise class participation

Three themes emerged for barriers to exercise class participation: 'Health limitations', 'External constraints' and 'Intrinsic constraints' (Box 3). While similar themes emerged from all focus groups, there were differences between the three groups for the subthemes and categories of coded statements.

Health limitations: All groups expressed that the presence of pain, or the belief that exercise may exacerbate pain, prevented some residents participating in exercise:

The pain in my knees got worse with the exercise classes. (Resident)

And the presence of a sensory impairment such as poor hearing or eyesight was highlighted as a barrier to participation:

I can think of one lady that would not go because of her hearing. (Therapist)

All focus groups identified continence issues, either bladder or bowel, as important barriers to attending classes:

Incontinence would stop some people coming to the exercise classes because of fear of an accident. (Therapist)

And the timing of exercise classes was believed to influence class attendance by all groups but for differing reasons. The residents and nurses groups identified the physical issues of toileting, fatigue, and medication effects as barriers, with the early morning class perceived as a particular problem:

If I have not used my bowels I can't go to the exercise class early in the morning. (Resident)

The therapists group believed the time slot was an issue as it coincided with other activities. A number of issues related to fatigue were raised as barriers to exercise class participation. Poor sleep patterns, tiredness from exercise, and the influence of medications on early morning routine were all discussed:

They still have the effects of their medications in the morning, they are still tired, their balance is a bit off because of their sedation. (Nurse)

The residents group considered both past and existing medical conditions as important barriers. Past medical conditions prevented or hindered their participation:

I've got nothing against exercise classes, but I have a pacemaker which stops me. (Resident)

and existing medical problems impacted on their ability to attend:

That much wrong with me, I go when I feel like it. (Resident)

Both staff groups identified poor physical capabilities as a barrier. The nurses group described its impact on attendance in two ways: first, residents were unable to do all the exercises offered in the class and, second, residents were unable to access the venue independently:

They think the staff are too busy to take them to the classes, don't want to hassle the staff. (Nurse)

The therapists group suggested that poor physical capabilities made some of the residents feel inadequate compared with their more able-bodied peers:

Fear of not being able to keep up with all the others. (Therapist)

Poor memory and depression were raised as barriers by all focus groups, as residents may not remember when exercises classes are held:

The residents forget, they need visual cues and a daily prompt. (Nurse)

or lack motivation to attend:

It is hard to motivate people with depression. (Therapist)

External constraints: The early class time slot was considered a barrier to class attendance by residents and nursing staff due to morning fatigue, not having used their bowels before the commencement of the class, morning stiffness, or side effects of medication:

Their diuretics, they are always going to the loo. (Nurse)

The location of the classes was considered a barrier by the nurses group as some residents with cognitive impairment were frightened by a change in location and some residents were unable to access the venue independently so relied on nurses or carers to take them:

Manage quite well in their own areas, but take them just into the hall and they become very apprehensive about whether they are going to get back. (Nurse)

The therapists group considered a lack of support from residents families, doctors, and nursing staff may hinder or prevent residents from attending the exercise classes:

I know a lady whose grandchild put her off by laughing at her being in a leotard. (Therapist)

They believed that if doctors did not recommend the exercise classes then the residents often did not attend.

Intrinsic constraints: All focus groups acknowledged that some residents may not wish to exercise in a class setting. The point made strongly by the residents group was that exercise is personal and that different people like to exercise in different ways.

All focus groups mentioned that the 'health beliefs' of some residents about being *'too old' (Resident)* to exercise or requiring rest from exercise to recover were barriers to participation. Comments by residents also indicated that some were unaware of the benefits of exercises for older adults and what occurs in the classes:

Box 3. Summary of barriers to exercise class participation.

Theme: Health limitations

Subthemes	Categories of coded statements
Past medical conditions	Previous operations[R] Previous medical conditions[R]
Existing medical conditions	Current health problems[R]
Pain	Existing pain prevents exercise[RNT] Existing pain exacerbated by exercise[RT] Fear exercise will exacerbate or cause pain[N]
Poor physical capabilities	Unable to do all the exercises[N] Unable to access the venue independently[N] Feelings of inadequacy[T]
Sensory impairments	Poor eyesight[RNT] Poor hearing[NT]
Bodily functions	Urinary incontinence[RNT] Bowels need to be used before the commencement of the exercise class[R] Bowel actions[N]
Fear	Fear of falling[T] Fear of re-injuring or exacerbating previous conditions[T]
Cognitive functioning	Poor memory[T] Depression[T]
Fatigue	Fatigue[R] Exercise causes fatigue[R] Fatigued by morning activities[N] Tired early in the mornings[T] Medication effects[N]
Memory issues	Forget when the exercise classes are conducted[RN]

Theme: External constraints

Subthemes	Categories of coded statements
Time slot	Fatigued after morning tasks[R] Have not used bowels before the morning exercise class[R] Stiff and sore[N] Morning tasks[N] Medication effects[N] Coinciding activities[T]

Theme: External constraints (cont'd)

Lack of support	Lack of family support[T] Lack of medical practitioner support[T] Lack of nurses' and carers' support[T]
Locations	Frightened with changes of location[N] Unable to access venue independently[N]

Theme: Intrinsic constraints

Subthemes	Categories of coded statements
Lack of information	Unaware of benefits of class[R] Unaware of what occurs in the class[R]
Grief and loss	Adjusting to residential care[T] Experiencing grief and loss of home[T]
Personal choice/rights	Exercise is personal[R] Individual choice to participate[RNT]
Self-consciousness in a group	Threatened by strangers[N] Do not wish to mix with others[N] Language barriers[N] Embarrassed as they can't do all the exercises[N] Embarrassed by exposure of legs, petticoats and underwear[T] Self-conscious about moving in a group[T] Feelings of inadequacy[T]
Health beliefs	Require rest to recover from health problem(s) [R] Too old[R] Perceive they do not need to exercise[T] Perceive there is no point in exercising[T]
Previous lifestyle	Never previously participated in exercise classes[T] Past experiences of exercise classes[T]
Psychological issues	Guilty about having a good time[T] Isolate themselves[T]
Lack of motivation	Other things to do[R] Other tasks are more important[NT] Can't be bothered[N]

R = identified by residents focus group; N = identified by nurses focus group; T = identified by therapists focus group

Didn't realise what the classes were about. (Resident)

Both staff groups stated that many residents were self-conscious or embarrassed about exercising in a group for several reasons, including the risk of exposing underwear:

They are waving their legs around and showing their undies and petticoats, so they find a reason not to exercise. (Therapist)

And claimed some residents could not be bothered to attend or did not see exercise as a priority:

There is something else they need to be off doing. (Therapist)

Staff noted that residents new to the facility often experienced a period of grieving and were reluctant to join in group activities:

> *I call it the cooling off period. They have just moved in and they have to go through all that trauma and drama of losing their homes, family bringing them in. Some of them really don't want to have anything to do with anybody. (Therapist)*

The therapists group acknowledged that a previous lifestyle of never having participated in an exercise class or having a bad experience of exercise classes was a barrier to residents attending:

> *If exercise is a whole new concept then they are less likely to come. (Therapist)*

They also mentioned that some residents displayed the psychological barriers of feeling guilty about having a good time in the classes or wanting to isolate themselves:

> *They tend to close themselves up in their rooms and no one encroaches and no one hurts them. (Therapist)*

Discussion

The motivators (Box 2) and barriers (Box 3) identified in this study were consistent with the findings from studies investigating community-dwelling adults (Balde et al 2003, Brittain 2002, Cohen-Mansfield et al 2003, Mota et al 2007, Newson and Kemps, 2007, Sallis et al 1992, Wilcox et al 2006,). However, several of the barrier subthemes (bodily functions, lack of support/encouragement, sensory impairments, self-consciousness in a group, memory issues, and grief and loss) are unique to our study. This may be because previous studies used different methodologies to explore exercise barriers, or alternatively these barriers may be unique to the residents of this low-level care facility.

No group raised the content of the exercise classes (the actual exercises) as influencing exercise class participation. For the participants in this study, issues surrounding the structure and processes of the exercise classes had a greater influence on class participation. Further research is required to determine whether the content of an exercise class influences exercise class participation in residential care.

Differences in motivator themes and barrier subthemes between the three focus groups were expected and appropriate given the assumed epistemology of social constructionism. The nurses and therapists group identified a theme of 'personal characteristics facilitating exercise participation by residents. The residents focus group did not voice this same theme using these terms, however they voiced the opinion strongly that it was a personal choice whether they attended the exercise classes. This may have reflected a similar concept articulated in a different way. There was most compatibility in identifying barriers to exercise participation between the residents and nurses focus groups. For example, the residents and nurses groups considered morning class time as a barrier to exercise participation because of fatigue and bowel issues. The nurses group also felt medication effects and morning stiffness contributed to the barrier. Conversely, the therapists group thought the time slot was an issue because it coincided with other resident activities. This compatibility between groups is not surprising as nurses and carers are closely affiliated with the residents on a daily basis and therapists are often removed from residents day-to-day activities. However, it does highlight the need to consult all stakeholders, especially the consumer group, when planning a service such as an exercise classes.

The findings of this research enabled the development of a number of specific recommendations to increase exercise class participation in low-level residential care. We proposed that this facility offer classes in either a mid-morning or after-lunch time slot to allow sufficient time for residents to complete morning activities and to use their bowels. And by locating the classes within the residents immediate environment it would prevent the distress of some residents and reduce the distance and help required to access classes. Enhancing the social aspect of the classes with an occasional social gathering afterwards was suggested to provide an extra incentive to attend and potentially increase both peer support and the comfort of residents exercising in front of each other. Encouraging the support of family members, health professionals, and doctors for the exercise classes, and addressing residents health issues such as physical pain and depression were also recommended as important strategies to increase participation. To address residents forgetting when classes were held and the perceived lack of information about the classes, it was proposed that staff make an announcement on the intercom system prior to class commencement, make verbal announcements at lunchtimes, and provide written information about the classes in newsletters or on pin-up boards.

This study demonstrated that a relatively inexpensive process of consultation with all stakeholders in a residential care facility's exercise classes generated useful data about barriers and motivators to exercise that may be used to modify exercise classes and increase participation. While this study has the strength of providing rich descriptive findings, it must be remembered that the information generated is specific to a particular exercise class in a metropolitan low-level care facility at a certain time from a sample of residents and staff. As the first study to explore motivators and barriers to exercise among low-level care residents, it represents a point for future research in investigating the effectiveness of the recommendations.

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