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Title

Views and experiences of visually impaired older people and exercise instructors about the Falls Management Exercise programme: a qualitative study.

Running head

Falls exercises for visually impaired older people

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Abstract

Purpose: To gain insight into visually impaired older people's views regarding acceptability of an adapted Falls Management Exercise programme, and to explore Postural Stability Instructors's perspectives on provision of the programme.

Materials and Methods: Data from this qualitative study comprised interviews with nine visually impaired older people and two Postural Stability Instructors. Data were analysed using thematic analysis.

Results: Themes identified from interviews with the participants related to self-perception, exercise-related factors and facilitators to participation. Participants positioned themselves as not old or at risk of falls, felt exercises were not challenging enough and recommended that home exercise materials be offered in individually tailored formats. Themes identified from interviews with the instructors related to programme adaptations for visual impairments, exercises and facilitators to participation. Instructors recommended stratifying groups into levels of ability. Social time after the exercise sessions was deemed key in programme adherence by both participants and instructors.

Conclusions: Visually impaired older people have similar barriers and facilitators to group-based falls prevention sessions as older people without visual impairment, but seem to have more difficulties in motivation to exercise at home. Both participants and instructors felt the main facilitator to adherence to group exercise sessions was the social time.

Keywords

accidental falls, aged, exercise, vision impairments, qualitative research.

Introduction

It is estimated that globally 285 million people are visually impaired [1]. In the United Kingdom (UK) there are between 1.6 million and 2.2 million people aged 65 years or older who live with a visual impairment [2]. Older people with a visual impairment are at a higher risk, and are more fearful, of falling than older people without visual impairments [3] as sight loss adversely affects balance, stability and the ability to safely move within the physical environment [4]. This can, in turn, lead to restricted mobility [5]. In the UK 21% of the overall cost of treating accidental falls was attributable to falls-related hospital admissions in the visually impaired [3].

The Falls Management Exercise programme is an existing cost-effective, individually-tailored group programme that includes targeted training for dynamic balance, bone strength, endurance, flexibility, gait and functional skills [6],[7]. Participating in this programme can help community-dwelling older people to increase their physical activity levels and to reduce falls [6],[7]. Although this programme is recommended in the UK [8], until recently it was unclear whether this programme was also feasible for visually impaired older people. To investigate this, a mixed-method randomised controlled trial, comprising a 12-week group-based Falls Management Exercise programme specifically adapted for visually impaired older people, was conducted. The quantitative results of this trial showed that adaptation, recruitment and delivery of the amended programme was successful [9],[10]. The aim of the qualitative component of the study was to understand the views and perceptions of both the visually impaired older people who participated and the instructors delivering the programme on the appeal, feasibility, and suitability of future delivery of the adapted programme to maximise future uptake, attendance and adherence. Although previous research had already identified several facilitators of, and barriers to, older people's engagement in, and continuation with, community-based exercise programmes [11],[12], most of this work

focused on older people in general. To date, it is unclear whether visually impaired older people experience similar facilitators (such as perceived health benefits) and barriers (such as denial of falls risk and practical barriers to attend groups) as those reported in these studies. Further, the experiences of Postural Stability Instructors delivering the Falls Management Exercise programme have not previously been explored in any depth.

Materials and Methods

Participants and settings for this trial have been described in full previously [9],[10]. Prior to commencement of the trial, ethics approval was obtained and written informed consent was obtained from all participants. Briefly, participants of the main trial were community-dwelling older people aged 60 years and over who attended a low vision clinic and/or were members of organisations for the visually impaired. Staff of these organisations identified potential participants and passed on their expressions of interest to the research team.

Visually impaired older people who were interested in participating received further detailed information. Participants were reimbursed for travel expenses to the venue.

Participants allocated to the intervention group attended one-hour weekly Falls Management Exercise programme sessions over 12 weeks in community venues with a maximum capacity of ten participants per group. The structured exercise content of the Falls Management Exercise programme remained as the original. The exercises participants received included individually-tailored and targeted training for dynamic balance, strength, endurance, flexibility, gait, and functional skills such as the ability to get down to and up from the floor. Participants also received a standardised home-based exercise programme which were provided in large-text booklets or audio format. Participants who were randomised to the control group received no intervention but were offered an equivalent exercise programme

after the study. From the 33 participants randomised to the intervention group, a purposive sample was drawn for the post-intervention evaluative interview phase. Sampling was based on variation in site, gender, level of visual impairment, level of fitness, and (positive or negative) expressions of motivation during the group exercise sessions. The latter two criteria were judged by the Postural Stability Instructors. Semi-structured one-to-one interviews were conducted by experienced qualitative researchers on site to gain insight into the views and feelings regarding the acceptability of the adapted programme. The interview questions were formulated using the research questions aims, objectives and outcomes with the addition of areas suggested by stakeholder panels of visually impaired older people that were convened prior to the main trial [10]. Interviews with the two participating Postural Stability Instructors aimed to explore their post-intervention perspectives on the provision of the programme. All interviews were recorded onto an encrypted digital recorder, and field notes were recorded after each interview. Data from interview transcripts were thematically analysed taking an inductive approach [13],[14] First, the anonymised transcripts were read through independently by three researchers (LDdJ, DC, CB) several times to familiarise themselves with the data and to identify candidate themes using open coding and listing codes under higher order heading. To enhance trustworthiness and credibility and to refine the final themes, a data analysis clinic involving an additional fourth qualitative researcher (DAS) was organised. All researchers discussed, and agreed on, the final themes and subthemes.

Results

Participants

Three male and six female visually impaired older people (age range 62-91 years) were interviewed. Their characteristics can be found in table 1. The two participating qualified female Postural Stability Instructors, with both >20 years of experience in the exercise

industry across a range of areas and currently delivering the mainstream Falls Management Exercise programme in the community setting, were also interviewed post-intervention.

Findings: visually impaired older people

Themes relating to the participants' reasons for participating and their experiences with the research process are beyond the scope of this paper and have been reported in the study's final report [10]. Here we report the three identified themes relating to participation in the exercise intervention: *self-perception*, *exercise-related factors* and *facilitators to participation*. Quotes relating to these themes and subthemes can also be found in table 2.

Self-perception

A complex multifaceted theme was that of self-perception with participants positioning themselves as not old, but rather independent and falls risk free. Some participants suggested they were too young to be in the programme and that they had a low risk of falling. For example, even one participant who had had falls before did not fully engage with, or seem to understand, the risks and falls prevention aspect of the study:

I just thought, I didn't fall about much before and I don't now...I feel that I'm not the right sort of person to be doing it'. (Participant 8, female, 91 years)

It was suggested that those who were more frail, had worse sight or were older might gain more from participation. Another theme was the fatalistic views expressed about health and falls risk, with a falls risk viewed as an expected part of ageing:

A lot of the time, genetically you're given your...you know, what your...what your lot is, what your hand of cards are and you've got to play it. (Participant 3, female, 62 years)

Exercise-related factors

The first theme was that some participants felt the programme was not challenging in terms of physical demand or effort. As a consequence, some participants felt that the exercises, although enjoyable, did not result in expected benefits such as weight loss, increased muscle strength or preventing a fall. However, a second theme emerged about the tangible benefit of an increase in confidence in activities such as using escalators. The third theme concerned home exercise. Lack of motivation was mooted as challenge to comply with the home exercise component:

It's soulless when you are doing that in the house on your own because there's a fun element in the class, and there's a bit of banter and a cup of tea. (Participant 2, female, 68 years)

Whilst the home exercise leaflets (CD with sound files and large print booklets) were deemed useful, participants recommended they should also be available in different modalities including screen reader, voice synthesiser, MP3, Digital Accessible Information System talking book and Braille.

Facilitators to participation

This final theme revolved around the importance of a social activity (tea, coffee and biscuits) after the exercise sessions with study staff and fellow participants. This was deemed very enjoyable and pleasurable:

Loved that tea, coffee, biscuits, and the gossip... As I say, they always made you feel welcome.

(Participant 9, male, 62 years)

Findings: Postural Stability Instructors

Three main themes were identified from the interviews with the programme instructors:

adaptations accommodating visually impaired older people, exercises and facilitators to participation. Quotes relating to these themes and subthemes can also be found in table 3.

Adaptations accommodating visually impaired older people

The Postural Stability Instructors followed the original Falls Management Exercise programme exercises but with a more ‘hands on’ and ‘verbal’ style of delivery (compared to the mainstream classes). Examples included the need to sometimes help people into exercise positions as they could not see the demonstration and give detailed and descriptive ‘paint a picture’ verbal instructions:

Sometimes in mainstream I can sit or stand quite quiet and they continue the exercise, but with the visually impaired you do scenarios, like we are going to step over this puddle, where in mainstream if you have got a class and they are pretty well sighted you can just say once.

(Postural Stability Instructor 1)

The instructors also set the room out with the different visual impairments in mind, which included offering participants an anchor point such as a solid chair to aid balance and act as a reference point. The second theme that emerged was that the instructors also suggested an

additional instructor to facilitate more challenging activities such as getting on and off the floor, or to assist with larger group sizes (with different levels of ability).

Exercises

Just like the visually impaired older people, the instructors also expressed concerns about the (either too high or too low) level of challenge of the exercises for some. One instructor felt she could have used stronger resistance bands. It was suggested that functional inabilities and co-morbidities of some participants hindered their own as well as other ‘fitter’ participants’ progression:

If the others are marching away no problem and the others have to sit down for some time they are the ones that would feel like they are holding the class up. It is the ones with more health issues that would feel they are holding the class up.....: “why can’t I be the same as them, I shouldn’t be in this class, I can’t do that”. It’s just their way of thinking: “I’m holding it up.[...] (Postural Stability Instructor 2)

Impairments such as deafness and arthritis negatively impacted the sessions more than the visual impairments. It proved difficult to intensify the sessions for those more ‘able’. A second theme was about home exercise and the need for additional formats.

Facilitators to participation

The instructors felt that the social time at the end of the exercise classes was an opportunity to discuss wider health and well-being increased overall motivation to attend sessions. The second theme that emerged was that of stratifying the groups into level of ability so that fitter individuals could be challenged more. Finally, the instructors felt strongly that sessions only for visually impaired older people were not necessary and suggested that an aid to motivation

to take part was to involve them in mainstream Falls Management Exercise programme sessions:

I felt the clients coped with it absolutely amazing, obviously there is a few differences depending on illnesses etc. that people have got, whether dementia, or arthritis whatever, there is always differences, but that is in sighted people as well, so I couldn't see any reason why those people couldn't be in a big group, a mainstream group, I would not segregate them. (Postural Stability Instructor 1)

At first both instructors felt somewhat anxious about running the classes with visually impaired older participants:

I think the first few sessions I was terrified I was patronising them, can you do this, can you do that? These people might be visually impaired but they are not daft.
(Postural Stability Instructor 1)

I was apprehensive about [the floor exercises] because my own place we don't take people onto the floor, the people that I work with, so I was nervous doing that.
(Postural Stability Instructor 2)

However, as the programme progressed both instructors grew more confident in their skills and communication:

[...] I'd love to do it again, but if they went into mainstream, great, cause I've got the confidence now with visually impaired in my classes. (Postural Stability Instructor 1)

I'm a lot more confident now, just even talking to someone with visual impairment, you know there's nothing wrong with them, you talk normally.

(Postural Stability Instructor 2)

Discussion

This is the first time that the views and experiences of visually impaired older people and the Postural Stability Instructors who deliver group exercise sessions have been considered together in terms of acceptability of the Falls Management Exercise programme. To our knowledge the views of older people with visual impairment on group exercise have not previously been reported. The themes emerging from the visually impaired older people and the programme instructors were very similar regarding the exercises themselves and the home-based component. They also both emphasized the social element of the programme being vital in adherence and motivation to continue despite concerns about the offered programme's level of challenge. The two instructors expressed strong views about visually impaired older people not needing to be 'together' in a specific group, but instead allowing their integration into mainstream classes with sighted people.

The visually impaired older people interviewed in this study had a tendency to perceive themselves as independent and falls risk-free in spite of living with a visual impairment, similar to previous research in older people without specific visual impairment [11],[12],[15],[16]. However, in a study with registered blind people (ie. with worse vision than the participants in this study), people did perceive that falls risk was increased when people had health issues or changes in balance with age and did perceive that with poor sight, falls were more likely irrespective of physical function [4]. Some participants also claimed a fatalistic acceptance of falls risk as an inevitable part of ageing. Such fatalistic views have

been reported in studies of views about exercise in falls prevention in older South Asian adults, but were also voiced by some white British older adults. [16] This reinforces the idea that falls prevention exercise should be presented as something that will help independence rather than something that will prevent falls [11]. In addition to a lack of knowledge about falls [17],[18], many older people may perceive they are not at risk of falling because such beliefs are associated with an implication of dependency and incompetence [19],[20]. These beliefs may partly explain why some participants asserted that the exercises in and of themselves were not physically challenging and were designed for older and more frail older people, and why they presented as active, fit and not at risk of falls.

It is of note, however, that the Postural Stability Instructors also felt that for some participants the exercises were not challenging enough. The instructors felt they could have challenged some of the more able participants more in terms of strength, for example by using a greater range of resistance bands. The lack of strength training progression has also been seen in previous literature on delivery of falls prevention exercises with a general older population [21], but it is not known if the lack of progression is due to lack of available equipment, or concerns from instructors about 'overdoing' progression in case people stop attending. The instructors felt they could also have challenged some participants more if groups were stratified according to function. Despite the perceived lack of challenge most visually impaired older people felt more confident during some activities, which suggests that the balance work was challenging enough.

Both the participants and the instructors spoke about the difficulty of adherence and motivation to do home exercises in between sessions or to continue at the end of the programme, which has been reported previously in studies with older adults with visual impairment [5],[22]. It was suggested this was mainly due to the absence of camaraderie and group support when exercising alone, and the format of home exercise materials not being

appropriately tailored to individual needs and preferences. Perhaps the choice of attending more group sessions rather than relying on home exercise to achieve the intended 'dose' of exercise would be more appropriate for those with visual impairment, as it would for those without visual impairment, who have difficulty motivating themselves to exercise at home.

Although efforts were made to increase the availability of different formats, such as providing participants with a CD containing sound files and large print exercise booklets, this did not appear to help exercise uptake. Because suggestions were made by both instructors and visually impaired older people to also consider providing home exercise materials in braille, on DVDs and on MP3 files, it is recommended that visually impaired older people be offered individually tailored home exercise material that suits their visual impairment.

Both the participating visually impaired older people and the instructors recognised the importance of the social element of the programme as an opportunity for people to chat about other things, share strategies and discuss other health issues with each other and the instructor. This was voiced by both groups as a facilitator to participation in the sessions, and recent research has indeed shown that inclusion of a coffee hour to socialise increased the likelihood of registering for a falls prevention programme in a general older adult population [23]. Social time, meeting new people and having fun has also been cited as an important aspect of group delivered FaME exercise in older people residing in nursing homes [24]. One qualitative study reported the views of older adults of attending regular group exercise and found that being part of such a group helped them feel socially connected and a sense of security in the community through supporting each other [25]. As involving social time in health promotion interventions has previously been shown to alleviate social isolation and loneliness in the older population [26], this could also be considered in future research in visually impaired older people.

A key perspective offered by the Postural Stability Instructors was that visually impaired older people could attend mainstream falls prevention programmes as long as these exercise groups were not too large. Prior to the exercise sessions starting, the instructors received a 2 ½ hours training from members of a vision charity (Visibility, Glasgow) in communication (‘painting a verbal picture’ of the exercises) and guiding techniques. This training also covered the need for weekly discussions with participants about any changing needs regarding support, aids, position in the class (lighting/hearing) and the importance of social contact and peer support within the group [10]. The Postural Stability Instructors offered further insight to individual adaptations for those with visually impairments in mainstream groups, such as giving more verbal cues and instructions and offering anchor points in the exercise room. Larger group sizes would require additional instructors to facilitate floorwork and individual ‘hands on’ movement feedback if needed. The ability to progress those who were more physically fit would be facilitated by stratified groups according to ability.

Although this research collected the views of only two instructors, these first views do suggest that it may be worthwhile to consider offering tailored background knowledge and skills training to instructors who are planning to deliver similar exercise sessions to visually impaired people or who want to incorporate visually impaired people into their mainstream sessions. Certified Postural Stability Instructors received over 200 hours of training, but prior to this study this training has not specifically focussed on issues that could play a role in visually impaired people. Since this study, the training provider for Postural Stability Instructors has integrated additional training into the main qualification to cover working with those with visual impairment. For those who have previously qualified, there is now an online webinar so that all have access to the main factors they need to consider to incorporate

those with visual impairment into mainstream classes. Further research of the views and experiences of those with and without visual impairment in such classes would be warranted.

The main limitation of this study is the small sample size. The nine participants were relatively fit visually impaired older people from an urban population with no ethnic minorities. Also, only two Postural Stability Instructors participated and offered their views, including the view that older people with visual impairment could join mainstream classes. The older people in the study were not asked this specific question in their interviews. These limitations may impact on the overall trustworthiness of the findings and their generalisability to a wider population.

Conclusion

Findings from this study suggest that, similar to older people without visual impairment, some participants felt they were not frail or old enough to benefit from exercise. Some had fatalistic views that falls could not be prevented. Results also suggest visually impaired older people have similar barriers and facilitators to group-based falls prevention sessions as older people without visual impairment, but seem to have more difficulties in motivation to exercise at home, despite multiple formats being available. They would prefer, as the instructors, that groups were stratified into levels of ability so that exercises could be more or less physically challenging, depending on the whole group and not individuals within the group. Both the participants and the instructors felt the main facilitator to adherence to group exercise sessions appeared to be the social time and was preferred to home exercise for this reason.

Declaration of Interest

Dawn A. Skelton is a Director of Later Life Training Ltd, a not for profit company delivering national accredited training in Falls Management Exercise (also known as FaME) programme. All other authors report no conflict of interest.

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Table 1. Characteristics of the nine interviewed participating visually impaired older people.

Participant	Age	Gender	Past Medical History	Visual Impairment	Degree of VI impact	Age at onset of VI	Physical activity pre-intervention	Type of activity
1	62	Male	Nil	Glaucoma	Light perception right eye, black blind left eye	Registered blind age 40 years, problems started in 20s	Weekly session at local gym	Circuits
2	68	Female	Seasonal acquired depression	Macular degeneration	Central field loss, problems with glare	66 years	Weekly exercise class	Steps
3	62	Female	Diabetes	Diabetic retinopathy, retinal detachment, cataracts	No depth perception, glare	27 years	5 times a week	Running 5-10k, spinning, Pilates
4	76	Male	Nil	Macular degeneration	Cannot read, central vision loss	Unknown	Sedentary	N/A
5	73	Male	Diabetes, stroke, osteoarthritis	Refractory problem, diabetic retinopathy, cataracts	Cannot read	62 years	Sedentary	N/A
6	82	Female	Osteoarthritis	Congenital glaucoma	Only sees light and dark and some shape perception	Birth	Daily joint exercises, weekly walking	Hand and foot exercises, walking around the block
7	77	Female	Hypercholesterolemia	Macular ischaemic retinal vein occlusion, cystoid macular oedema, cataracts	Right eye blind, left eye constantly blurred	72 years	Weekly exercise	Tai Chi, swimming, walking
8	91	Female	Atrial fibrillation	Macular degeneration	Central vision loss, reads with magnifier	85 years	Weekly exercise	Yoga swimming.
9	81	Female	Osteoarthritis	Macular Degeneration	Central vision loss, reads with magnifier	75 years	Weekly exercise	Line dancing class

N/A, not applicable; VI, visual impairment; 5-10k, 5-10 kilometers.

Note: All participant characteristics were self-reported.

Table 2. Themes, subthemes and exemplary quotes emerging from the interviews about the adapted FaME exercise programme with participating visually impaired older people.

Theme	Subtheme	Exemplary quotes
Self-perception	I'm not old, dependent or at risk of falls	<i>"I disliked the use of the word old in VIOLET. [...] And I suppose that kind of stopped me in my track before I went ahead and sort of say [...] how do I see myself in today's world? And I'm not really old. I mean, I feel as though I'm 20 in my mind. So I didn't want to really be involved in something that was part of... an old age group." (Participant 3)</i>
		<i>"I thought I was a bit too young to be there. I think if I had known what it was all about when I applied, I don't think I would have applied." (Participant 4)</i>
		<i>"There were people who had worse sight than me, and it must have helped them a lot more, to get around and keep themselves safe in the house." (Participant 5)</i>
		<i>"I just thought, I didn't fall about much before and I don't now. I feel that I'm not the right sort of person to be doing it." (Participant 8)</i>
	Falls risk viewed an expected part of ageing	<i>"A lot of the time... genetically you're given your...you know, [...] what your lot is, what your hand of cards are and you've got to play it." (Participant 3)</i>
Exercise-related factors	Level of challenge	<i>"I think [the exercise classes] were too easy. I think they could have been developed more. I think I would be speaking for every adult my own age and beyond that would like something a bit more... a bit more lively." (Participant 2)</i>
		<i>"[The balance exercises were] Not really challenging. [...] I didn't find the exercises required any effort as such, but it encouraged me to take up the chance of [a more challenging exercise programme] where you're really working yourself for that hour." (Participant 4)</i>
		<i>"I decided to go to the study for the muscle part, you know, to build muscle. [...] Like I said, [another type of exercise classes] do all of that, and they actually focus on the strengthening of the muscle groups as well which is great. But I would choose to do other classes unless they vamped this up a bit and made it energetic, more vibrant." (Participant 2)</i>
		<i>"I thought we might go down [the] way [of losing] surplus fat..." (Participant 4)</i>
		<i>"I think it was useful in so far as it kept me active. I don't think it stopped me falling." (Participant 8)</i>
	Tangible benefits in confidence	<i>"Particularly using escalators, I would think, is an example. Where using the escalators I'm probably more confident than I was." (Participant 1)</i>
		<i>"So I decided to go to this study and see if it helped me to... for the muscle part. You know, to build muscle. And it did actually give me a lot more confidence." (Participant 2)</i>
	Home based exercises and booklets	<i>"It's soulless when you are doing that in the house on your own because there's a fun element in the class, and there's a bit of banter and a cup of tea." (Participant 2)</i>
		<i>"I think in the group situation you are more likely to get on and do them, you are less likely to do them in the home situation." (Participant 6)</i>
		<i>"[The home exercise leaflets were] well-worded, aye. You're able to continue to do what you were doing here if you wanted, you know, were interested in that type of thing, aye." (Participant 4)</i>
		<i>"Yes [I found the homework book beneficial]. I mean, it's sensible to say use this when you put your toast on [...] I liked the prompts." (Participant 7)</i>
		<i>"It might be easier if it was produced, say, in another format. Like an MP3 format or some kind of format like that." (Participant 1)</i>
Facilitators to participation	Social time	<i>"Loved that tea, coffee, biscuits, and the gossip... As I say, they always made you feel welcome". (Participant 9)</i>
		<i>"So I think having done it the way we did it, it was [...] business-like and achieved what it set out to achieve. But it also had a personal touch, an aspect to it, which I think is important." (Participant 1)</i>
		<i>"I enjoyed the get together with other people. And they're doing exercises and having the music and stuff like that. That, to me, is a very normal, desirable, happy kind of activity to do. [...] It doesn't appeal to me to do that on my own, living on my own. You know, it's not a way I want to spend my time. I would rather be out." (Participant 2)</i>

Table 3. Themes, subthemes and exemplary quotes emerging from the interviews about the adapted FaME exercise programme with Postural Stability Instructors (PSIs) delivering the programme.

Theme	Subtheme	Exemplary quotes
Adaptations and accommodating VIOP	A more ‘hands on’ and ‘verbal’ style of delivery.	<i>“The exercises were as FaME, but there was more hands-on for me, so touching bringing the hands closer together.” (PSI 2)</i>
		<i>“Every single detail has to be talked through and you have to do it week on week. I always said who was in the room. [...] [I talked] more than within mainstream. Sometimes in mainstream I can sit or stand quite quiet and they continue the exercise, but with the visually impaired you do scenarios, like we are going to step over this puddle, where in mainstream if you have got a class and they are pretty well sighted you can just say once.” (PSI 1)</i>
		<i>“You have got to do a lot more describing with the totally blind, every single detail has to be talked through. [...] One of the things with the people who are totally blind I noticed was that they need pulling up on their technique, give them more feedback and use their name so they know you are talking to them.” (PSI 2)</i>
		<i>“Having the chair there, even if they don’t need it for balance, gave them their point in the room so that was really good. Some of them didn’t touch the chair at all, but it anchored them where they should be. Especially one of the clients who was totally blind, I could see him wandering away from the chair and I could say: “[name] check in with the chair, it’s just to the left” and he would just tap the chair and he knew to move back over. That was something I hadn’t thought about, but was very good. You do need a chair but simply for an anchor, they didn’t need it for balance.” (PSI 2)</i>
	Additional instructors needed sometimes	<i>“If you have only got one or two [VIOP] in a class of mainstream, no [the PSI does not need help from another], but if you’ve got a class full, 8 to 10, then you need someone, whether it be in case someone turns up with a guide dog, you know, they don’t know where to put their coat, their cane, and it’s just to ensure they are getting the quality, the time spent on them.” (PSI 1)</i> <i>“Taking them to the floor, you would certainly need someone strong enough to get them up. I think you need a second person for your frailer people in case there is a fall.” (PSI 2)</i>
Exercises	Level of challenge	<i>“There was huge variance in functional capacity, with some really frail, so trying to individualise and really challenge. I personally wasn’t used to that big difference in functional ability. We just need to make sure we challenge them more.” (PSI 1)</i>
		<i>“A lot of them progressed very quickly through the bands; we could have done with stronger [resistance] bands. Going forward more guidance on what exercises to do, what is more beneficial . . . I felt I hadn’t worked them hard enough.” (PSI 1)</i>
		<i>“If the others are marching away no problem and the others have to sit down for some time they are the ones that would feel like they are holding the class up. It is the ones with more health issues that would feel they are holding the class up.....: “why can’t I be the same as them, I shouldn’t be in this class, I can’t do that”. It’s just their way of thinking: “I’m holding it up”.[...] The majority were very strong, very able. We might just have got lucky but I could do an awful lot more with these clients, all of them.” (PSI 2)</i>
	Home based exercises and booklets	<i>“Well, within our exercise book we run through, so you’ve got your warm up, mobilise and stretch, and then you’ve got your circulation booster and your balance, then strength, then cool down within the booklet. It was a bit higgledy piggedy.” (PSI 1)</i> <i>“We found within the homework book obviously a lot of them didn’t have readers at home, for to see the book, or they didn’t have CD players to play, or they had dementia and they forgot to do it.” (PSI 1)</i>
Facilitators to participation	Social time	<i>“From feeling totally unfit they started, and then realising they had been on their feet for a full hour and exercising, yes they were puffed out at the end, but it was a nice feeling of puffed out so it was worth having that bit social afterwards with tea and coffee so that they would talk about that as well.” (PSI 1)</i>

		<i>"They liked the social and the bit chat, some of them wouldn't have come out if it wasn't for the group." (PSI2)</i>
	Stratify groups according to ability	<i>"Yes, it's difficult for the PSI [to try and cope with that massive spectrum of people]. [...] [I] adapted certain exercises [for example] the way you set the chairs out, sometimes you circle them like an oval shape, the less able can hold on all the way round, but the more able can walk on the outside, walk faster and do other things as well, so nobody felt left out." (PSI 1)</i>
		<i>"You might have something like level 1 and level 2 and have some sort of functional assessment that you would do at the beginning, then we could really push people. [...] I guess strength wise some of them could have done 100 sit-to-stands. They were so strong in the legs, so again different levels." (PSI 2)</i>
	Accommodate VIOP into mainstream classes	<i>"I felt the clients coped with it absolutely amazing, obviously there is a few differences depending on illnesses etc. that people have got, whether dementia, or arthritis whatever, there is always differences, but that is in sighted people as well, so I couldn't see any reason why those people couldn't be in a big group, a mainstream group, I would not segregate them." (PSI 1)</i>
		<i>"[I delivered the FaME exercises] exactly the same, I don't even think anyone had to be adapted. [...] Just make sure the instructor [of the mainstream class] has got the information [about the visual impairment] most [VIOP] will be alright. In fact, we ended up just before I started this, a blind chap joined my mainstream class, and all he said was as long as I get someone to show me the next station and there's a chair at the station, as long as someone can just give me an elbow to get me round and tell me what's on the wall then I'll be fine." (PSI 2)</i>