



Royal Conservatoire
of Scotland

**SCOTTISH
BALLET**

EDINBURGH
dancebase
NATIONAL CENTRE FOR DANCE

Dance for Parkinson's Scotland (DfPS)

A partnership between Dance Base and Scottish Ballet

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DR BETHANY WHITESIDE

JUNE 2017

1. Executive Summary

Commissioned in the spring of 2017 by Scottish Ballet and Dance Base, this mixed methods evaluation had a broad focus: to interrogate the perceived cultural, social and physical benefits of the Dance for Parkinson's Scotland (DfPS) programme for individuals with Parkinson's taking part. Data collection took place over a period of two months at the studios of Scottish Ballet (Glasgow) and Dance Base (Edinburgh). This report presents the aim, methods, and key findings of the evaluation, situated within a wider discussion.

An analysis of the data suggests that the DfPS programme is beneficial for participants in a number of interconnected ways.

Perceived cultural benefits

Developing a relationship (appreciation and enjoyment) for ballet and dance through: experience of the freedom and expression that dancing brings; the opportunity to learn company repertoire; experiencing the workings of a professional ballet company.

Perceived social benefits

Feeling part of a 'community', a 'collective', a 'company' united by a shared sense of determination to participate and responsibility for one another, supported by the generating of friendships and social networks both within, and outwith, the studios.

Perceived physical benefits

A positive impact on balance, coordination, posture, flexibility, and self-confidence in particular.

The use and embedding of elements of exercises, tasks, and experiences outside of the studios within daily life.

In addition:

Key findings demonstrate the place and role of DfPS within everyday living: the experience of the classes in comparison to other exercise-based activities, what makes DfPS 'different', and how participants draw upon social networks built and a toolkit of strategies from the former activity to improve quality of life.

Bethany Whiteside, Royal Conservatoire of Scotland, June 2017

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3. Background and Context

“In 2015 Dance Base, Scotland’s national centre for dance, and Scottish Ballet, Scotland’s national dance company, came together to realise a shared ambition to offer a Dance for Parkinson’s Scotland programme. Our aspirations were to create a programme which provided inclusive and creative dance and music activities to people with Parkinson’s and their families, as well as increasing the delivery skills of dance practitioners across the central belt. Building on the knowledge and learning developed by the Mark Morris Dance Group, both Dance Base and Scottish Ballet have combined forces, along with the University of Glasgow, NHS Glasgow and NHS Edinburgh to increase awareness, raise the profile of the importance of the work, and evidence the progress and impact the work has on people with Parkinson’s.”

Catherine Cassidy: Director of Engagement, Scottish Ballet

Jenny Langlands: Chief Executive, Dance Base

June 2017

3.1. Parkinson’s

Parkinson’s is a progressive neurodegenerative condition. Symptoms affect individuals to different degrees and the cardinal physical effects include dyskinesia (resting tremor), slowness of movement (bradykinesia), stiffness of muscles, ‘freezing’ while moving, lack of coordination and a posture that becomes stooped. Facial expressions can be affected resulting in a ‘mask’ face quelling expression of emotions; the voice may also become quieter. Non-motor symptoms, linked to the aforementioned physical affects, include depression, which can lead to loneliness and isolation.

3.2. Dance for Parkinson’s

The Dance for Parkinson’s Scotland (DfPS) programme was inspired by Dance for PD[®] created in 2001 through a partnership between the Brooklyn Parkinson Group (BPG) and the Mark Morris Dance Group (MMDG), instigated by Olie Westheimer, founder and Executive Director of the former organisation. David Leventhal is the current Program Director of Dance for PD[®]. The Mark Morris model has since ‘launched in more than 100 communities in 9 countries’ (Dance for PD[®], online), with classes and organisations worldwide retaining the original shared ethos:

‘that professionally-trained dancers are movement experts whose knowledge about balance, sequencing, rhythm and aesthetic awareness is useful to persons with PD; that all classes welcome and include people of all abilities, as well as families, friends and caregivers; and that the class is about the art, technique, and fun of dancing’ (Dance for PD[®], online).

There exists a concrete and developing body of work investigating the beneficial effects of Dance for Parkinson’s. Key sources include a two-part investigation of English National

Ballet's (ENB) Dance for Parkinson's (DfP) programme (Houston and McGill, 2011; 2014) and McRae et al's (2017) investigation of the long-term impact of attending Dance for Parkinson's Disease (DfPD) classes on daily activities (physical and psychosocial) outwith the studio, and the link between self-efficacy and functional mobility to quality of life. However, with some exceptions (including the sources noted above), the majority of relevant studies focus on the physical effects of dancing for people with Parkinson's (including, Batson, 2010; Hackney and Earhart, 2010; Shanahan et al, 2015). There is limited but growing attention to the perceived social and cultural benefits of participation gained through mixed methods and qualitative means.

Therefore, this evaluation seeks both to evidence understanding of the perceived benefits of participating in DfPS, and to contribute to the existing body of work in the field.

3.3. The Dance for Parkinson's Scotland (DfPS) programme

The pilot of the Dance for Parkinson's Scotland programme, ran in partnership by Scottish Ballet and Dance Base, launched in April 2016 and was inspired by a shared ethos based on facilitating and nurturing accessible, inclusive, and high quality dance experiences:

'There is something really powerful about finding out what happens, the impact of the chemistry and the brain with dancing, and how that particularly helps with Parkinson's' (Miriam Early, Education Officer, Scottish Ballet).

'We passionately believe that dance is for everybody' (Allan Irvine, Participation Manager, Dance Base).

The pilot aims to enable all involved, but especially participants with Parkinson's, to benefit from a range of cultural, social and physical benefits, including improved balance, spatial awareness, social confidence, and freedom of movement and expression. In addition to building on a shared ethos, the DfPS programme also complements and expands upon the commitment of both organisations to working with adults aged 60+. Both currently run a number of classes and programmes for Elders (including Regenerate at Scottish Ballet) and have noted the high interest with sessions full and in some cases, operating waiting lists. DfPS is also situated, organisationally, within a greater focus on health and wellbeing. Strengths of the partnership are discussed further in the [Discussion](#).

However, the journey taken by each organisation differs slightly. Dance Base has been running Dance for Parkinson's classes since 2010, originally through a partnership with the Edinburgh branch of Parkinson's UK, and has developed extensive expertise through classes led originally by Mo Morgan, and latterly by Jen Cunningham, Rhiana Laws, Christina Liddell and Sophie Younger.

In addition to this mixed methods evaluation, a quantitative research study is also being led by Dr Grosset, Consultant Neurologist based at Queen Elizabeth University Hospital, in partnership with the University of Glasgow, NHS Glasgow and NHS Edinburgh.

Key members of the DfPS team

Scottish Ballet

- Catherine Cassidy, Director of Engagement*
- Lorna Murray, Education Manager*
- Miriam Early, Education Officer, Scottish Ballet (lead DfPS practitioner)*
- Hayley Earlam, Practitioner
- Derek Baron, Musician
- Joanna Daskalou, Dance Support Worker
- Heather Young, Dance Support Worker

Dance Base

- Jenny Langlands, Chief Executive*
- Allan Irvine, Participation Manager*
- Jen Cunningham, Lead DfPS Practitioner*
- Rhiana Laws, Lead DfPS Practitioner
- Christina Liddell, Practitioner
- Sophie Younger, Practitioner
- Robert Briggs, Musician
- Gordon Reynolds, Volunteer Musician

*Core members of the DfPS Steering Group together with Magdalena Schamberger, Dr Grosset (Queen Elizabeth Hospital, Glasgow), Dr Gordon (Western General Hospital, Edinburgh), Dr Alison Williams (Dance Base participant), Eddie and Wilma Kerr (Scottish Ballet participants) and Jo Bungay.

Training

Key personnel across both locations have taken part in a range of relevant training opportunities including:

- 2013, People Dancing Summer School, Leicester, (Miriam Early)
- 2015, People Dancing Summer School, Leicester, (Lisa Sinclair and Hayley Earlam).
- 2016, at Dance Base and Scottish Ballet with David Leventhal (Scottish Ballet and Dance Base practitioners)
- 2016, training for Dance Support Workers at Scottish Ballet
- 2017, training for Dance Base volunteers
- 2017, May, training for all practitioners and musicians with English National Ballet (Associate Dance Artist, Danielle Teale and musician, Nathan Tinker).

3.3.1. The classes

Two classes take place at Scottish Ballet, from 11.45am-1pm and then again from 1.45-3pm. Social time takes place in the green area with participants from the morning class staying on and participants for the afternoon class arriving early.

The class at Dance Base takes place on a Wednesday, running from 11.30am-1pm. A short break takes place at 12.30pm and a social time is scheduled to follow the end of the class.

Classes at both locations share a number of features including:

- Live music
- Social time with refreshments
- Volunteers supporting the classes*
- Free to attend
- Welcoming of spouses and partners
- Welcoming of guests to class (including physiotherapists and dance artists)
- Facilitation of attendance at Scottish Ballet events
- Classes with artistry at their core
- A set format and structure (discussed further below)

* Many of the volunteers at Scottish Ballet are part of the Regenerate programme for Elders.

3.3.1.1. Content, format and structure

Both classes have a shared focus on movement, improvisation, and vocal work, and draw on verbal instruction, memory, imagery and narrative, and repetition and frequency of movement. However, the Scottish Ballet classes are more closely linked to the repertoire of the company. Within the period of data collection, this included 'Highland Fling' (choreographed by Matthew Bourne and inspired by August Bournonville's 'La Sylphide') and 'A Streetcar Named Desire' (choreographed by Annabelle Lopez Ochoa). The Dance Base classes have a greater focus on contemporary movement and themes drawn from the practitioners' own ideas and creativity.

The format and structure at both classes takes a similar approach. The creative teams will have a key theme to work with for a number of weeks with content being slightly tweaked with each class. The structure gently leads with a greater focus on the individual before content morphs into necessitating whole group performance, enabling people to settle in and build on the strong interactional element as the class progresses, and to instigate and regulate the flow of dopamine and endorphins. Features of both classes include:

- Settle (bringing awareness to breath and posture) and easing participants into the class.

- Sun Salutation focusing on a greater range of movement and extension using the arms, torso and spine. At Scottish Ballet, the Settle and Sun Salutation are linked to the same theme to ensure continuity in thought and imagery. 'The Sun Salutation's been running for years and it works. There's something really joyous about it' (Jen Cunningham, Dance Base).
- Chair-based exercises that continue to build on range of movement, upper and lower body, spatial awareness, flexion and extension, and establishing connection between participants: 'Not just about reaching more, but what are you reaching for?' (Miriam Early, Scottish Ballet).
- Vocal exercises and exercises engaging facial muscles.
- A standing section focusing further on travel, transfer of weight, strong rhythms and 'whole body movement' (Jen Cunningham, Dance Base). The classes are 'all about setting the participants up for when they're standing. About that connection with the floor, how they articulate and utilise their body and their feet' (Hayley Earlam, Scottish Ballet).
- Reverence and thank you with, and to all, in the space.

4. Summary of Methods

To reiterate, the evaluation focuses on the perceived cultural, social and physical benefits of DfPS, primarily for, and from, the perspective of the participants with Parkinson's involved.

Data collection took place over an intensive period (March-May 2017) through adopting a triangulation of methods, leading to a more complete picture with heightened accuracy of results, and the presentation (in subsequent sections) of the dominant themes and findings. Mixed methods were adopted to seek understanding of the range of experiences had: 'As participatory art, dance is a multifaceted phenomenon' (Houston and McGill, 2012, p.104).

It is significant that this evaluation took place at the end of the pilot programme when the majority of participants felt particularly comfortable with each other, and had also been involved in the research being undertaken by Dr Grosset and colleagues, and with various media opportunities. It is also important to note that participants across both locations were, as a whole, notably invested in this evaluation and welcomed the opportunity to be involved.

4.1. Semi-structured and ethnographic interviews

Semi-structured interviews allow rich detail and narrative to be gained, personal to the interviewee, and constitute a flexible model that allows new and significant topics and themes to arise. Ten interviews took place with participants with Parkinson's (two were joint with spouses) across the two locations and nine interviews took place with organisational staff, including practitioners, musicians, and volunteers. [Appendix 1](#) presents the specific framework of questions attached to the interviews which broadly focused on the experiences of being involved with DfPS. The majority of semi-structured interviews lasted between 20-60 minutes.

4.2. Participant observations

Participant observation saw myself as the external evaluator joining in (dancing) all of the classes over the data collection period: six at Dance Base and 12 at Scottish Ballet (owing to two taking place on the same day), allowing data relating to the content, atmosphere and inter-class interaction, to be obtained. Trust and rapport was gained through active participation, however, it is also important to note that it was organisational policy that 'guests' to the classes participated fully, rather than sitting at the front to watch (and owing to the concentric layout of the chairs, there is, actually, no front to face).

4.3. Questionnaire

A number of questionnaires have been drawn upon for research and evaluation including the DPQ-39 and the Dance for Parkinson's questionnaire (DPQ), the latter developed by Professor Cynthia McRae at the University of Denver. A second questionnaire developed by Cynthia McRae and David Leventhal focuses on the perceived benefits of dancing for people with Parkinson's on life outside of the studio. Given that the vast majority of participants attending both classes had been participating for more than six months (indeed, many of the Dance Base participants had attended class for a number of years, albeit in a slightly different format), the latter questionnaire was used following kind permission by Cynthia McRae. An amended version, featuring one question from the DPQ (see [Appendix 2](#)), was completed before or after classes over a period of three weeks (to account for different attendance patterns, affected particularly by the Easter break). This approach of intensive data gathering 'on site', and the investment of many of the participants with Parkinson's in the evaluation, accounts for the high response rate - over 70% at both locations (42 respondents) based on the register of active attendees.

[Appendix 3](#) details the data collection schedule encompassing all three methods.

4.4. Ethics

Ethical approval was granted by the Ethics Committee of the Royal Conservatoire of Scotland (RCS). Informed consent was gained from all involved. Pseudonyms are employed when drawing on the experiences and opinions of class participants. For ease of understanding, 'participants' throughout the report refers to individuals with Parkinson's, unless further clarification is made.

4.5. Analysis

Thematic analysis was undertaken through the creation of a grounded coding frame, with the interviews with participants with Parkinson's acting as a starting point. All of these interviews were audio recorded, transcribed and then coded through noting the main ideas, issues, and sentiments arising from the data. Additional data, gained from interviews undertaken with practitioners, musicians, spouses, partners and volunteers fed into this coding frame. The questionnaires were analysed through using excel and presentation of numerical data (unless otherwise stated) combines data gained from Scottish Ballet and Dance Base.

4.6. Limitations

Key limitations are linked to the relatively short period of data collection time, necessitating the need to view the findings as a 'snapshot' rather than the dancing as an intervention (the classes could not act as their own control group). In addition, although the questionnaire was sensitively constructed, and also shortened to better complement the questionnaire method being adopted by Dr Grosset's team, and being mindful of 'research fatigue', it was still time-consuming and tricky for some participants to complete. Participants were also reminded that they did not need to complete every question if they did not wish to. This accounts for the varying number of respondents across and within certain questions. Owing to the response rate, across and within questions, findings should be viewed as indicative rather than representative.

It should also be noted that, as will be demonstrated, these groups of participants demonstrated high levels of determination and self-efficacy, potentially shaping data collected and analysed.

5. The Participants

5.1. Discovering DfPS

The majority of respondents (64%) (16 out of 25) from Scottish Ballet joined the classes when the pilot first launched, April-June 2016.

Respondents from the Scottish Ballet classes had varied means of finding out about the classes. There is a high incident of finding out through word of mouth (50%, 11 out of 24 respondents) including advice given through medical professionals, with other means being the local Parkinson's UK branch (25%, 6 out of 24), and through social media and television footage.

The means of discovering the classes at Dance Base is a little different owing to the longstanding relationship between the organisation and the Edinburgh branch of Parkinson's UK, and the fact that classes took place before the onset of the pilot programme. Thus 71%¹ of respondents (10 out of 14) found out in this way, correlating with the fact that 50% of respondents (7 out of 14) joined the class before the pilot programme, and have continued to attend classes.

5.2. Motivation to join

Within the interviews, a sense of determination denoting self-efficacy, were central themes in explaining initial motivation to join the classes: 'I jumped at it', 'anything that will help', 'I'll try anything.' The onus here was very much on the potential physical benefits:

'I felt there must be something in it. There must be something in it. I never wanted to dance but if it's going to be helpful, I'll put my hand up' (Deborah, Scottish Ballet).

For others (seemingly a minority), dancing was a key motivator: 'Dancing has always made me feel good and very, very happy' (Grant, Scottish Ballet).

However, based on interviews held, there appeared to be a greater reticence among male participants to joining. Yet, just over half of all participants are male (22 out of 41 respondents), contrasting with the gender imbalance present in the Elders classes and programmes ran by Scottish Ballet and Dance Base.

Other interviewees talked of the importance of the opportunity to meet new people and to be part of a greater support network.

This sense of determination emerged as a key theme concerning both behaviour within the classes and motivation to continue attending: participants are proactive, invested, and enjoying feeling a sense of achievement through participation. The groups display high

¹ Throughout this report, percentages are rounded to the nearest percentage point.

levels of self-efficacy demonstrated, in part, by a regular attendance pattern: 95% of respondents (38 out of 40) attend every week on average.

100% of respondents (38) would recommend DfPS to others, or have already done so.

100% of respondents (42) responded positively to the question, 'Do you think DfPS helps you feel better?'

5.3 Demographics

Detailed below is further information concerning the specific demographics of respondents attending:

- The average length of time since being diagnosed with Parkinson's, within both locations, is seven years (based on 24 respondents at Scottish Ballet and 13 respondents at Dance Base).
- The average age of respondents at the Scottish Ballet classes is 65. Range = 50-80.
- The average age of respondents at the Dance Base class is 71. Range = 61-80.
- Concerning the highest level of education undertaken: 45% of respondents (19 out of 42) had undertaken university or Higher Education, 38% (16 out of 42) college or Further Education and 16% (7 out of 42) high school education. Interestingly, there is a marked difference between Scottish Ballet and Dance Base - 60% (9 out of 15) of participants at the latter had undertaken Higher Education.

Table 1: Perceived level of Quality of Life

Respondents perceived their quality of life to be as follows:

<i>Response</i>	<i>Percentage of respondents</i>	<i>(n=39)</i>
Excellent	5%	2
Very Good	33%	13
Good	46%	18
Fair	13%	5
Poor	3%	1

6. Presentation of Findings

6.1. Perceived Cultural Benefits

The importance of cultural values within the classes appears to be secondary in relation to the importance of physical and social benefits derived. (Appendix 4 details a breakdown of responses to the question ‘What parts of the dance class are most valuable to you?’). Yet a key theme that has emerged from across the data sets is that ‘DfPS is different’ in comparison to other exercise-based activities. Herein lies a key attraction for enjoyment and continued attendance (explored further in the Discussion) closely linked, in part, to the cultural experience inherent to DfPS.

6.1.1. Developing a relationship with dance and ballet

As mentioned above (Motivation), for many participants, dance was seemingly not a key attraction for joining the class and indeed, for some, acted as an initial barrier for participating: ‘I was reluctant to come. I thought, you know ‘Dance Base’, wasn’t for me...’ (Timothy, Dance Base).

However, drawing on the journey of participating, several participants shared how the experience of DfPS has fundamentally changed their relationship with dance as an art form:

‘Dancing’s not something I’ve ever done or been particularly interested in. It’s supposed to be good for Parkinson’s. It was the benefits more than the actual doing of it. Dance is just such a big, wide void to me, almost. I didn’t know what to expect so I was a bit scared... most of its outwith my comfort zone... But it’s changed now. When I’m talking about the dancing with my husband, I can immediately feel it inside. My inside just lifts and I want to smile... every time I think about dancing, I can feel my insides light up’ (Elaine, Dance Base).

For more than a third of all respondents, cultural benefits derived from participating in DfPS, are shaping life outside of the studio on a daily basis:

Table 2: Activities of Daily Living (Cultural effects)

<i>Statement</i>	<i>Percentage of respondents who agree or strongly agree (in rank order)</i>	<i>(n=36-41)</i>
I integrate music and rhythm more fully into my daily life to help me get things done.	56%	23 (n=41)

I find myself thinking during the day about images my teachers use in class to describe dance steps or movements.	44%	16 (n=36)
I find myself thinking during the day about things my teachers say about different qualities of movement.	44%	16 (n=36)

High rankings demonstrate an extremely positive relationship with the action of dancing, with the lower ranking perhaps most closely related to Parkinson's.

Table 3: Impact of dancing (DPQ) (Cultural effects)

<i>Statement</i>	<i>Percentage of respondents who agree or strongly agree (in rank order)</i>	<i>(n=39-41)</i>
Dancing makes me happy/brings me joy	98%	40 (n=41)
Dancing takes me out of myself	93%	38 (n=41)
Dancing increases my self-confidence	90%	35 (n=39)
Dancing gives me a great feeling of togetherness	85%	33 (n=39)
Dancing helps me to feel more in control of my life	55%	22 (n=40)

6.1.1.1. Generational aspect

As mentioned above, the average age of respondents is 65 at the Scottish Ballet classes and 71 at the Dance Base classes. 50% of all respondents (20 out of 40) indicated that they had never accessed any type of dance activity previously, and many of the 'yes' answers noted that dance activity had only taken place briefly as a child. This can be viewed as a startling figure, although respondents may have had varying views of what counts as a 'dance activity': for example, ceilidh dancing may have been discounted. However, the limited experience suggested, coupled with being part of an older generation, has had a significant impact on the effect of participating in a dance activity with artistry at its core.

'We're of the generation where my grandparents were still Edwardians and they believed that children should be seen and not heard, so you didn't

express yourself at home, you sat there a lot of the time and behaved and it's taken a long time to shed that... And I think, *suddenly it's like being given permission to be free...*' (Anna, spouse, Dance Base, emphasis added).

6.1.2. Learning about dance and ballet

Over the course of just the six weeks of sessions observed, a wealth of references to the dance and ballet worlds were noted, relating to the Scottish Ballet classes in particular, through:

- Drawing on imagery, proprioception, kinaesthetic sensation and emotion and expression within movement.
- Use of dance and ballet terminology in the classes i.e. *tendu*, *ronde de jambe*, canon
- Showing of footage of ballets that shape the content of the class
- Explanation of details (history and narrative) of ballets
- Learning Scottish Ballet's repertoire within classes (including David Dawson's 'Swan Lake', Matthew Bourne's 'Highland Fling' and Annabelle Lopez Ochoa 'A Streetcar Named Desire').

Participants spoke of the benefit of having danced some of the 'Hansel and Gretel' repertoire, before seeing it on stage, or within a rehearsal: 'we had a wee grasp of the story as we went' (Laura, spouse, Scottish Ballet). Maria Jimiez, Artistic Coordinator, had asked Miriam Early to let her know what repertoire for 'A Streetcar Named Desire' they would be learning in the studio as she would try to coordinate the rehearsal watched to match that scene (observation).

'During one section of class, we were asked to face the mirror, working in partners and 'holding' fireflies. Hayley (Earlam) told us, "You are dancers in the wings, waiting to go on stage" and explained that we needed to first use our downstage arm and that downstage was named so as "stages used to be raked"' (observation).

Additional cultural experiences have been facilitated throughout the pilot. For example, one day of classes (at Scottish Ballet) was delivered by Associate Dance Artist, Danielle Teale and Musician, Nathan Tinker, from English National Ballet inspired by Akram Khan's 'Giselle.' Three of Scottish Ballet's company dancers, Bethany Kingsley-Garner, Evan Loudon and Thomas Edwards, have also participated in DfPS classes (and training) through the Dancer's Education Group (DEG).

6.1.2.1. Seeing performance

Inherent to the opportunity to learn about the art form and specific dance genres, is the experience of watching ballet performance.

Participants from both classes have had the opportunity to see Scottish Ballet rehearsals and performances: ‘I think seeing the rehearsals is really good because you’re just there as yourself, not as a member of an elitist community. Best seats in the house’ (Stephen, Scottish Ballet). Participants were made to feel special and like they belonged. During the dress rehearsal of Christopher Hampson’s ‘Hansel and Grete’, the rehearsal stopped and started as necessary for corrections to be made: thus, a ‘real’ experience was being accessed. For some participants, previous experience of attending a dance performance at the theatre had been confusing and unfulfilling:

‘I went to see a ballet in Theatre Royal 30 years ago and I thought, “When are they going to say something?” I just wasn’t used to that. Nobody told me that. I appreciated the music. I didn’t appreciate the dancing’
(Grant, Scottish Ballet).

Through the action of seeing Scottish Ballet company dancers rehearse, many participants have a heightened sense of appreciation and respect for ballet culture:

‘Watching rehearsal, you’re impressed by the physique, working to get the body perfect, and can just enjoy the movements they create from really fit bodies. And I get uplifted by it to a certain extent. Somebody gives you a key to open a door to appreciate certain things on a deeper level’
(Grant, Scottish Ballet).

6.2. Perceived Social Benefits

‘Participating in a group activity with others’ (95%, 40 out of 42 respondents) and ‘Social interactions with other class members’ (90%, 38 out of 42 respondents) were revealed as parts of the class that were especially valuable. (See [Appendix 4](#)).

Social benefits relate broadly to the non-physical health and wellbeing entities of participating in DfPS. The content of the class is designed and nurtured to allow for numerous moments of sociability through the dancing, for example, through being encouraged to catch someone’s eye during exercises, holding hands in partners. In addition,

‘The social time in between is very important. After class I think everyone’s feeling better, their bodies are maybe looser, more relaxed. And then because you’re feeling good in yourself, you want to go “oh, did you enjoy it?” “Yes!” You do want to talk about it!’
(Evangeline, spouse, Scottish Ballet).

Complementing a theme discussed in a succeeding section, ([Taking exercises outside of the studio](#)), certain groups of participants within classes socialise outside of the class. Many participants, particularly at the Dance Base classes, knew each other beforehand but others have formed firm friendships through DfPS:

‘I suppose a lot of the other things (other exercise activities) you don’t get time to chat at the beginning, and you don’t get time to chat at the end, which is something, it’s very important to me in this class’
(Elaine, Dance Base).

Responses to a spectrum of relevant statements focusing on the social and emotional experiences of participating in DfPS are presented below.

Table 4: Symptom Changes (Psychosocial Functioning)

<i>Statement</i>	<i>Percentage of respondents who agree or strongly agree (in rank order)</i>	<i>(n=32-40)</i>
Increases a sense of wellbeing	82%	32 (n=39)
Improves mood	78%	31 (n=40)
Increases a sense of accomplishment	68%	26 (n=38)
Gives me a sense of freedom	65%	24 (n=37)
Helps me feel like my pre-Parkinson’s self for a while	53%	17 (n=32)
Helps me focus on something other than Parkinson’s for a while	53%	17 (n=32)

It is also worth reiterating the findings presented in Table 3 that strongly suggest that dancing promotes self-confidence, freedom, joy and ‘a sense of togetherness.’

6.2.1. DfPS is a ‘community’, a ‘collective’, a ‘company’

A dominant theme within the data concerns the notion that DfPS is a ‘community’, ‘collective’ or ‘company’ – all terms that were offered by different interviewees as a way to explain the social nature of what is in place. Indeed, for one participant:

‘The thing that keeps me coming back is the pure sense of community’ (Emily, Dance Base).

‘People care about each other, you’re aware if someone’s struggling a wee bit. It’s a community’ (Stephen, Scottish Ballet).

‘It’s that sort of company mentality. They all come in prepared to work hard’ (Hayley Earlam). This latter quote can certainly be linked to the sense of determination and self-

efficacy which are constant themes throughout the data: participants are prepared to contribute and to give.

‘It’s like a collective in the sense of a lift of energy’ (Jen Cunningham, Dance Base).

Participants also commented on the inherent friendliness and understanding: ‘There’s a kindness in the group. It really helps when you’re not there, you know, until the next Monday; it’s really lovely to think upon’ (Deborah, Scottish Ballet).

‘Even people who are new, everyone just slots in. It’s so welcoming and a really nurturing environment’ (Jen Cunningham, Dance Base).

6.2.2. Working with emotions

People with Parkinson’s may feel an increased sense of emotion and struggle to control and share different feelings. Within DfPS, dance is used as a mechanism to safely explore and use emotions (for example, during a task, using your face and upper body to portray a certain emotion, and then choosing the emotion of another participant to show to the class), and the benefits are felt and appreciated:

‘I get my emotions out. One of the things... it’s just Parkinson’s. It has made me more emotional. Dancing’s always made me feel emotions. Dancing has always made me feel good and very, very happy. Just moving to music, just expressing yourself. Just letting how you’re feeling that day, out.’
(Grant, Scottish Ballet).

Ben (Scottish Ballet) shared that the ‘biggest hidden symptom of Parkinson’s is frustration... Sometimes I’m enjoying it deep inside, but you’re not seeing it on my face... *It (DfPS) works because you have time to express yourself*’ (emphasis added).

The practitioners are very aware of the role that emotions play, particularly within the studio, and think about:

‘how to incorporate moments and emotions into the class. Embrace it rather than “it’s ok.” Wellbeing is not just about the positive, but the negative emotions, and wellbeing is being able to deal with the negative... giving the group the space to support from within’
(Hayley Earlam, Scottish Ballet).

6.2.3. Support for, and around, Parkinson’s

For the participants, having a balance between being able to access Parkinson’s specific support, without the condition dominating, is key for continued enjoyment. It is interesting to note that a lower percentage of respondents (53%) (17 out of 32) perceive that the classes ‘Helps me feel like my pre-Parkinson’s self for a while’ and ‘Helps me focus on

something other than Parkinson's for a while' (see [Table 4](#)). Within the interviews conducted, being able to talk about Parkinson's appeared to be more important to the Scottish Ballet participants, suggesting that there may be a correlation between length of time that a group has existed (given that the Dance Base class existed previously in a slightly different form) and the balance of support required.

Participants shared the benefit of being inspired by certain individuals with Parkinson's, as well as having the opportunity to be aware of the condition at different stages, and for people with Parkinson's and their spouses and partners to support one another.

'The companionship with people who have gone through, or are going through this experience... You're actually looking for some stability' (David, Dance Base).

'Mixing with people, men and women, all from different backgrounds, from all over the place. All abilities in dance. And from a Parkinson's perspective, from different stages. The Parkinson's journey, it's absolutely super, to mix with all the people like that. And it definitely helps'
(Deborah, Scottish Ballet).

6.2.4. DfPS is part of the fabric of daily life

A high number of respondents (74%) (31 out of 42) attend another exercise based activity. Examples of additional activities undertaken by Scottish Ballet participants include:

- *Gym, strength and balance class*
- *Gym, aqua waterworks, dance fit, parkrun*
- *Strength and balance class*
- *Yoga*
- *Pilates*
- *Strength and balance class, gym*
- *Personal trainer, yoga, Pilates, cardio*
- *Circuit training*
- *Weekly exercise in a gym environment*
- *An exercise class organised by the local Parkinson's Group*

Examples of additional activities undertaken by Dance Base participants include:

- *Ballroom dancing once a week, Pilates*
- *Tai'Chi, Pilates, Nordic walking, aquafit*
- *Ballroom dance*
- *Tai'chi, cycling*

Across both locations, a number of participants see each other at other activities including ballroom, Pilates, Nordic walking and at the local Parkinson's branch meeting. Participants

explained how, and where, DfPS fits into their weekly routine, how different activities complement one another and that participation results in an increase in quality of life:

‘When you walk out into the Grassmarket, there’s a bounce in your step and you feel a bit lighter and look up to the sky and think “oh gosh, I’m really glad I’m still here” (Anna, spouse, Dance Base).

One couple attending the Dance Base DfPS class also go to weekly ballroom and Pilates classes:

‘It’s good the way it’s worked out, because the three things are quite different so the commonality about them is movement. But the three of them are so different that together; I think they’re really quite useful’ (Anna, spouse, Dance Base).

100% of respondents (30) who signalled that they attend exercise based activities elsewhere attend these once a week or more than once a week.

6.3. Perceived Physical Benefits

Together with the statement ‘Participating in a group activity with others’ respondents selected ‘Moving and getting some exercise’ as being the most valuable part of the class (95% respondents selected both, see [Appendix 4](#) for the breakdown of responses). This result correlates with the main line of reasoning given within interviews concerning motivation to join DfPS: to have a physical experience that would benefit living with Parkinson’s.

However, in contrast to the conversations shared about the perceived cultural and social benefits, some interviewees spoken with were unsure of the physical benefits potentially derived from participating:

‘I can’t say I notice any difference, but maybe I do’ (Stephen, Scottish Ballet).

‘I want it to be doing good [but] you can’t quantify it’ (Elaine, Dance Base).

Parkinson’s both fluctuates and degenerates making it difficult to give definitive claims as to the physical benefits derived. However, the questionnaire data from the current evaluation strongly suggests, that overall, respondents perceive that physical benefits are being felt. 65% (24 out of 37) agree or strongly agree that DfPS ‘improves motor symptoms.’

The table below provides a breakdown of the specific physical benefits perceived. It is interesting to note that qualities ‘closest’ to dance and ballet; flexibility, coordination, posture and balance, received among the highest rankings.

Table 5: Impact of dancing (DPQ) (Functional Mobility)

<i>Statement</i>	<i>Percentage of respondents who agree or strongly agree (in rank order)</i>	<i>(n=39-41)</i>
Dancing increases my self-confidence	90%	35 (n=39)
Dancing improves my flexibility	88%	36 (n=41)
Dancing improves my coordination	88%	36 (n=41)
Dancing improves my posture	85%	34 (n=40)
Dancing improves my confidence in movement	80%	33 (n=41)
Dancing improves my balance	78%	32 (n=41)
Dancing improves my activity tolerance/endurance	76%	31 (n=41)
Dancing improves my gait	74%	29 (n=39)
Dancing makes me feel more energetic	70%	28 (n=40)
Dancing improves my spatial awareness	66%	27 (n=41)

6.3.1. Fluidity and Flexibility

Correlating with the finding that 88% of respondents (36 out of 41) agreed or strongly agreed that ‘Dancing improves my flexibility’, interestingly, stretching as an exercise received the most specific mentions in interviews, as being particularly beneficial.

‘It combats stiffness’ (Stephen, Scottish Ballet). ‘The stretching ... I can move easier. Un-‘parkied’. As in Parkinsons’ (Neil, Dance Base).

‘I love the wonderful stretches. I just sort of lose my inhibitions and just get into a good stretch. Dynamic stretches. You just feel that it’s a stretch you want to do. You listen to your body and it’s what your body says you need’ (Grant, Scottish Ballet).

6.3.2. Bodily awareness

Participants spoke about the benefit of having a better understanding of the performance of their own bodies:

‘I hadn’t realised that my perceptive sense was skewed, was compromised, so when I think I’m doing a wide movement, I’m not. I’m only doing a partial movement, so (learning) that is a huge benefit’ (Emily, Dance Base).

6.3.3. Posture

Posture is one element of physicality that was possible to note during the classes observed. Certain individuals were noticeably entering the space hunched over, and through the course of the class, gradually straightened up. Posture is an aspect that members of the creative team and volunteers commented on as noticeably improving over the course of a session, and in some case over a series of sessions:

‘At the beginning, in the circle, you can see that people are all hunched over, folded in. They’re not comfortable, but by the end of the class, spines straighten, walking taller, there’s a fluidity in the movement that wasn’t there in the beginning’ (Rose, volunteer, Scottish Ballet).

6.3.4. Gait

Gait is another element, together with posture, which is a particularly visual marker, and thus easier to note progression of throughout single classes:

‘He (Evangeline’s husband) moves better by the end of class, because in the morning, you know, he maybe can’t put one foot in front of the other. Or stand up and walk across the room, but given a space in class when we’re moving, when there’s a rhythm to follow you can get on, and keep going without stopping’ (Evangeline, spouse, Scottish Ballet).

6.3.5. Balance

Owing to the link between Parkinson’s and an increased likelihood of falling, improving balance is a particular concern for participants and is strongly linked with increasing confidence in movement. Within the interviews, several participants linked the two elements together:

‘After the class, when I go to walk out, to go home, I feel much better able to walk out than I did when I came in... And many people, both participants and staff, in the group have said that they do see a difference and I believe them

in this. I remember that before I came, I was very hesitant and “staggery” is the best way that I could put it, and now I don’t. I didn’t feel like that very soon after I started coming to class. It gave me a confidence and a steadiness. I came to class feeling I was going to fall over any minute; now I don’t think about falling’ (Deborah, Scottish Ballet).

One volunteer shared that a particular participant was nervous about standing in class (she worried about falling and drawing attention to herself) but the confidence of this particular participant has grown so much that she always opts to stand now.

6.3.6. Confidence

Overall confidence received a higher ranking (90%) than an increase of confidence in movement (80%) and within the data, there is also evidence of the close link between physical and social confidence:

‘The more I dance, the more the proprioception sense is enhanced, and my perception of myself is normalised. My confidence builds in my ability of what I can achieve, speak and to find the words I need to say “I’m uncomfortable with that”, or “can you help me?” or “no thank you, I don’t need any help”’ (Emily, Dance Base).

In addition, although not inherently linked to functional mobility, both participants with Parkinson’s and partners and spouses, shared the social confidence derived from engaging in the vocal exercises – particularly if turn-taking was adopted necessitating everyone in the space to share something one at a time. (This element is explored further in [Gaining a sense of achievement](#)).

6.3.7. Taking exercises outside of the studio

60% of respondents (24 out of 40) believe that the physical benefits of participating last a few hours or days. However, a dominant finding that emerged from the interviews, supported by the questionnaire data, demonstrates that participants are choosing to recreate elements of exercises out of the class impacting on quality of life.

Table 6: Activities of Daily Living (Functional Mobility)

<i>Statement</i>	<i>Percentage of respondents who agree or strongly agree (in rank order)</i>	<i>(n=34-41)</i>
I find myself thinking during the day about things my teachers say about posture.	79%	27 (n=34)
I perform at least one activity of daily living with more ease.	69%	24 (n=35)
I'm able to move more fluidly.	64%	23 (n=36)
I trust my balance more when I'm out and about.	58%	21 (n=36)
I'm able to think about movement more logically.	59%	22 (n=37)
I find it easier to get around the house.	58%	23 (n=40)
I perform several activities of daily living with more ease	55%	21 (n=38)

6.3.7.1. Voices of teachers

The reasoning that you never forget the voice of your dance teacher is a common one. Participants across both locations of classes explained that 'hearing' instruction from practitioners outside of the studio forms part of their toolkit of strategies:

'Kitty told me how she pictures Miriam's voice to help with her posture, and to get up from a chair without arms, chanting "1-and-a-2-and-a", getting up on 4. She pictures Miriam's voice saying "grow" to help her sit and stand straighter' (observation).

'I can feel myself doing this [mimics sinking forward], and I can hear Christina's voice [mimics her posture improving, sits upright more]' (Elaine, Dance Base).

'I was down in London and I was walking over the Embankment Bridge. And I could hear my feet dragging, but we'd been doing some flamenco with Rhiana, and I could hear her voice suddenly call out, so I suddenly stopped [poses] and started moving again and it was such a lovely

moment – that physical reaction and physical memory coming through’ (Emily, Dance Base).

6.3.7.2. Everyday living

‘It’s important when people come into class to dance, that they enjoy that feeling of dancing and just move their bodies the way their bodies want to move, but also that they have something that they can take into the rest of their lives, whether that’s a physical tool, or a feeling of wellbeing, or a sense of community’ (Miriam Early, Scottish Ballet).

Interviewees across both locations shared how they embed elements of exercises learnt within their daily living:

‘In my housework, I try to incorporate the moves and the things that I’ve learned in the ballet. And I do make a conscious effort to do that. In the shower, for example, I do exaggerate the mouth movements and the facial movements, that Hayley has gone over with us in recent weeks... And if music comes on the television or the radio [and] it’s got a strong beat, well, I try if I’m hoovering or if I’m not doing anything, I try to march up my hallway along with the music. To try and incorporate what I’m learning in class. To try and make a connection’ (Deborah, Scottish Ballet).

‘I do some of the stretches, marching on the spot, step to the side. I try to remember to do something every day’ (Josie, Scottish Ballet).

‘I take certain movements like posture and walking. During the course of the day I think “now, you weren’t doing that when you were at Dance Base so don’t do it now”’ (Timothy, Dance Base).

One participant shared how exercises learnt transfers to other exercise domains:

‘There are specifics that I can take home and fit into my exercise classes. I do the stretches at the gym. I go into a corner where nobody can see me. I fit them in and they are very useful’ (Grant, Scottish Ballet).

7. Discussion

This section explores those enablers, factors and themes that contextualise the perceived benefits.

7.1. DfPS is 'different'

100% of respondents (37) agreed that 'DfPS is different to other exercise classes' undertaken.

'Dance does enhance my functionality, but what it does particularly, it gives me choice, it extends the range of my possibilities. It's the affordance, it affords me the possibility of making connections with other people. It affords me the possibility of learning about myself spiritually, physically, emotionally and of course, the possibilities of sheer having fun' (Emily, Dance Base).

The notion that DfPS is 'different' to other exercise-based classes is a dominant theme and closely linked to the perceived benefits discussed above, and as will be explored, the connection with dance, in particular.

Responding to the open-ended question, 'What do you think makes DfPS different?' (if respondents had ticked 'yes' previously to indicate that they thought DfPS was different), responses from the Scottish Ballet class included:

- *Works on vocal and movement simultaneously.*
- *Very well thought out. Movement relevant to the PD condition and its various manifestations.*
- *"DANCE" with music lets me vent or express my emotions using my body as an instrument.*
- *Focused, scientifically/medically basis within creative wrapper.*
- *Slower and gentler movements*
- *Everyone works to their own ability.*
- *More creative*
- *More tailored to Parkinson's*
- *The music, and the types of movement involved - and the people!*
- *More fun!*

Dance Base respondents provided the following:

- *More fun and lovely*
- *Seeing how professional dancers move. Imagining woven into everyday movements.*
- *More variation and a chat over a cup of tea.*
- *It puts me outside my comfort zone so gives me a great sense of achievement. Great fun. Makes me think in a different way, creative way.*

- *Music is lovely*
- *More sociable, live music*
- *Fun, escape*
- *More relaxed*

7.1.2. Feeling the dancing

The art form of dance, the condition that is Parkinson's, and the DfPS programme are all multifaceted, the latter necessarily so for participants: 'It's not just my physical health, it's my spiritual health, it's my emotional health. They all overlap' (Emily, Dance Base). Crucially, for one participant:

'The ballet covers all aspects. It's the only thing that addresses the whole spectrum - cognitive, social side, personal symptoms addressed... these are all things you'll not see in an exercise class' (Ben, Scottish Ballet).

'It is the mixture of everything. It's just the whole thing' (Elaine, Dance Base).

There are particular benefits with taking part in a practice that has artistry and kinaesthesia at its core:

'Dance settles me into myself, with my body. It reconnects me with my inner processes. I don't quite know what I mean by that, but it's almost like. I suppose there are moments in dance when I get into flow' (Emily, Dance Base).

'The girls are giving you bits from a particular ballet to move. It's good. You're not just doing a physical exercise, *a part of it is something else*. I think it's ballet as I would never have realised it before'
(Laura, spouse, Scottish Ballet).

'Coming from dancers, it's much more fluid and free movement in a way. This class is more varied, it's more imaginative, more fun, more free; you've got freedom' (Anna, spouse, Dance Base). Emily (Dance Base) feels 'lovely' when she dances.

7.1.3. Gaining a sense of achievement

Desiring and feeling a sense of achievement within the classes is closely linked to developing the self-efficacy that act as a key motivator for initial attendance, continued adherence, and also behaviour and participation within the class. Here, participants from both classes explain its importance:

'What I get a lot out of is being putting on the spot. A lot of people don't like that. And I didn't used to like it, but when they go round, the name game, "God, it's my turn", but then you do it and it's that sense of achievement "you've done it" ... I've done something, achieved something, beyond what I

would normally do. And that makes me feel good... And there are a lot of other things in the class I think, you get that from. Because most of its outwith my comfort zone... I do lots of other classes, lots of exercise, and *this one gives me something else, above and beyond what anything else does*' (Elaine, Dance Base, emphasis added).

'I've achieved things... Because they (DfPS) do so much that other classes can't do' (Ben, Scottish Ballet).

7.1.4. Accessible and Inclusive

Taking an approach, and creating an atmosphere, that is accessible and inclusive, is particularly important owing to the very personal relationship that participants have with Parkinson's and with the art form of dance.

Josie explains that the dance class gives her more options: she knows that she can sit down at any point and a volunteer, practitioner, or another participant will sit and dance with her. 'There's an acceptance of what people can offer' (Anna, spouse, Dance Base). 'People have got the option; they don't feel "Oh, I cannae do that"' (Laura, spouse, Scottish Ballet).

As Hayley Earlam (Scottish Ballet) explains: 'We design the classes based on them (the participants).' Everything taught and led can be amended and adapted, often in the moment, if necessary.

For new participants, 'Just the whole atmosphere made me welcome, and it didn't matter if you didn't know anyone. There was no-one watching you, no-one saying "oh, you're not doing it right" and that immediately put me at ease' (Elaine, Dance Base).

The accessible and integrated approach taken is very much directed by the ethos embraced by both organisations – each aims to facilitate and develop high quality, inclusive dance opportunities.

7.1.5. Enjoyment

This is a rather obvious focus to include but it is important to note that the classes were flooded with laughter and a sense of joy, correlating with the enjoyment gained and shared within the interviews. (Indeed, 86% of respondents selected 'Doing something fun' as one of the most valuable part of the class for them – see [Appendix 4](#)).

'Out of everything that I do, this is one that I really enjoy, cos' the other ones I really do go for the sake of going almost... I'm doing it because of the exercise bit of it. But dance, this dance group is different; I get the enjoyment as well as the exercise' (Elaine, Dance Base).

The below recounts one of many micro moments of laughter witnessed during the classes:

‘As part of the reverence, we were asked to pass an action on to the person next to us, inspired by the content of the class. One participant performed a *tendu* to another, they ‘passed’ it back to them – this inspired some rather frantic footwork to and fro as we all giggled together watching’ (observation).

7.2. Challenges for participants

7.2.1. Doing the dancing

In comparison to a question asking respondents what the most valuable parts of the dance class are (see [Appendix 4](#)), it is significant to note that the response rate to noting the challenges (below) was far lower. However, the three with the highest ranking all relate in some way to ‘doing’ the dancing.

Table 7: Challenges faced within DfPS classes

<i>Statement</i>	<i>Percentage of respondents who responded</i>	<i>No of responses</i>	<i>(n=37)</i>
Remembering the sequences of movements	73%	27	
Following sequences of movements	57%	21	
Doing a series of different movements in a set amount of time	54%	20	
Doing the exercises at the same speed as the instructor	49%	18	
The dance steps themselves	46%	17	
Being spontaneous during improvised exercises	41%	15	
Keeping my balance	38%	14	
Staying on the beat	30%	11	
Moving across the floor	27%	10	

Despite the particularly high ranking relating to ‘Remembering the sequences of movements’, interviewees spoke more explicitly about, or perhaps linked this statement concretely to, the actual performing of these movements. ‘It’s the doing of two things at once. Moving the legs in one direction, and arms in another’ (Timothy, Dance Base).

‘I find all of it quite hard. I find it hard to listen and do... I am listening to Miriam and I am watching Hayley and I still find it very difficult to translate what they’re doing into action. Especially when they add on two things. If they only ask me to do feet and legs, or only ask me to do arms and hands... but when they ask me to do feet and arms and head, no, it all breaks down for me there’ (Deborah, Scottish Ballet).

‘I’m not very good at the coordinated movements... I find it difficult to follow some of the sequences; it takes me ages to figure out’ (Paul, Dance Base).

Perhaps less related to the experience of having Parkinson’s, and more closely aligned with limited experiences with dancing is the sentiment that ‘there’s a right way to dance’ with some participants feeling like they’re ‘not a good dancer’ (Deborah, Scottish Ballet):

‘I know that despite trying very hard to listen, and to do what she says (practitioner), I still can’t seem to do it the way she’s doing it, and certainly not the way that I feel I should be doing it, and that annoys me, because I try. But I’ll do my very best’ (Deborah, Scottish Ballet).

However, as mentioned previously, the challenges faced by doing the dancing is strongly linked to the achievement felt in participating. Perhaps following on from this train of thought, some participants highlighted within interviews in both locations, that they wanted *more* dancing to take place. The opportunity for ‘free’ dancing that saw people travel with a strong rhythm across the floor (both classes saw at different points a ‘procession’ of partners moving down a line dancing together) was talked of as being particularly enjoyable and beneficial. Indeed there is a possible link here to the questionnaire data owing to the high quality of life perceived (Table 1) and ‘Moving across the floor’ was ranked as the least challenging aspect of the class.

During the Hornpipe section, (seated), we clicked our heels together, stamped three times, ‘hailed’ in the anchor and climbed the sails. At the end it got faster and faster and there was a huge burst of applause afterwards’ (observation).

7.3. Expertise and empathy of teachers

Participants attending classes at both organisations feel a close connection with the practitioners:

‘The teachers are fantastic. I can’t say enough about the teachers’ (Grant, Scottish Ballet).

‘The people are just amazing. Almost from the time you walk in at reception’
(Elaine, Dance Base).

‘I couldn’t praise them enough’ (Evangeline, spouse, Scottish Ballet).

Reflecting back to the formation of a ‘community’ explored previously, Deborah (Scottish Ballet) linked the creation and sustainment of this social state to the practitioners, talking of the ‘relaxed feeling to the class and, of course that comes mainly from Miriam and Hayley.’

The participants spoken with shared an understanding of, and appreciation for, the effort and planning that takes place behind the scenes: ‘For class alone there must be such a tremendous amount of preparation that goes in to it. Miriam, and the Regenerate ladies, and Lorna and her team in the office’ (Evangeline, spouse, Scottish Ballet).

Within one Dance Base class, during the ‘Name Game’, in response to the request to ‘comment on something that makes you smile’, two participants with responded with: ‘This class makes me smile’ and ‘I walked all the way from home to here, thank you, thank, thank you’ (observation).

7.3.2. Development of trust

As mentioned previously, for some participants, engaging in an artistic project with the label of ‘dance’ has been part of a journey, and a key factor that has added to the growing sense of comfortableness is the establishment of trust with practitioners involved: ‘I realise now what had been happening. Now I know what they are getting at’ (Ben, Scottish Ballet).

All of the practitioners are skilled teachers and have been involved since the beginning of the programme, with the Dance Base practitioners having accumulated several years of experience of working with people with Parkinson’s’.

‘I can see them always clocking a move; they’re always there if it seems someone’s going to fall’ (Ben, Scottish Ballet).

7.3.3. Practitioner perspective

The practitioners explained the pastoral element that is inherent to the DfPS classes and how this is more concrete compared with other classes taught. This relationship is also very much a two-way one: ‘We’ve invested in them, but they’ve really invested in us. If I’m away

‘where have you been?’ They know things that are going on in my life’ (Hayley Earlam). Creative ideas are also very much welcomed and embedded into the class content.

When one Dance Based practitioner returned after an illness to the class, she was greeted with cries of delight, and enjoyment at seeing her again was voiced as part of the response of a vocal exercise by individual participants (observation).

‘Hayley said Mondays are the best day in the week for her. Because she’s got the two classes. I think it’s them that make it to be honest’ (Laura, spouse, Scottish Ballet).

In addition to a genuine joy with working with all individuals in the classes, practitioners derive a sense of wellbeing from their creative autonomy: ‘It all comes from what’s been created that is so beautiful or just so lovely’ (Hayley Earlam, Scottish Ballet). Miriam shared a comment passed on by Danielle Teale from the ENB DfP classes: ‘The class is your choreography.’ Through the DfPS classes, Jen Cunningham (Dance Base) explained, ‘I found my style of teaching. I’ve just learnt so so much. It’s good to have space in the class, time to allow things to sit.’ Both creative teams very much work in collaboration with their colleagues: ‘It all flows together’ (Jen Cunningham).

Owing to the high level of attendance and adherence of participants, practitioners understand individual needs and personalities: what may trigger certain incidents: and who to keep an eye on: ‘We really care about them’ (Miriam Early, Scottish Ballet).

7.4. The importance of live music and the musicians

Participants stressed the importance both of the live music that was played in classes at both locations and the personalities of the musicians themselves, describing both music and musicians as ‘essential’ (Neil, Dance Base).

‘The music is absolutely super and I love it’ (Deborah, Scottish Ballet).

7.4.1. The music

‘I try to imagine it sometimes, if there wasn’t any Derek or any piano, and it just wouldn’t be the same. It makes me feel alive’ (Deborah, Scottish Ballet).

Musicians are able to react as necessary with regards to rhythm, tempo, and volume. In particular, the importance of a clear, strong beat was emphasised by participants, and responded to during the class: ‘you see a fluidity of movement’ (Robert Briggs, Dance Base). The musicians understand the need to simplify the music, to play big gestures to get people moving, and to be able to respond to atmosphere: ‘I’m really impressed with these guys. I wonder how they do it. They must be feeling the mood, the reflective mood and they just play what we need at that time’ (Grant, Scottish Ballet). ‘When it’s live with Derek, it’s so

sensitive, and then so jolly, it crosses everything. He has such a lovely way with him' (Evangeline, spouse, Scottish Ballet). During one Dance Base class, 'a participant chose to dance a skiing motion during a creative task, inspiring Robert Briggs to burst into the 'Ski Sunday' music!' (observation).

Derek Baron talked about the importance of playing people into the space with music that is serene and ambient: to set the atmosphere and to counteract the potential for participants to freeze as they enter. Subsequent accompaniment within the Scottish Ballet classes will be based on the repertoire and classes at both locations have a lively central section to them often accompanied by more dynamic music. The reverence is accompanied by music that is uplifting. 'There is certainly music that lends itself to being "right" for the different stages of the class' (Derek Baron, Scottish Ballet). A balance of set, classical and improvised accompaniment is played throughout, as is music likely to be familiar for an older generation. Events such as the time of year, people's birthdays, and anniversaries of particular bands and singers are also drawn upon for musical content.

Music breaks down a barrier.

'Whatever field participants come from, they're likely, initially, to get more empathy from the music than they would possibility from dance. One of the participants said "I never thought I would end up in a ballet class"... So actually to have a chat and walk in with me as a musician and I'm part of the group, it's a way of breaking down the barrier" (Derek Baron).

7.4.2. Interaction with musicians

Interaction in the form of conversations, banter and laughter, with the musician(s) was an absolute feature of both classes. Participants frequently suggest or request certain pieces of music. One Dance Base participant requested 'Fly Me to the Moon' and it was played the next week. Another Scottish Ballet participant mentioned that it was Vera Lynn's 100th birthday (on 20th March 2017), 'so I thought I better play some Vera Lynn tunes if I can' (Derek Baron).

Within certain exercises, for example those using facial expression, Robert Briggs and Gordon Reynolds (Dance Base) join in with their own expressive contributions. Within a Scottish Ballet class, 'Derek Baron, at one point, asked Miriam if he could share with the class where the Hornpipe (which we were learning) had come from with a story that prompted peals of laughter' (observation). Within the Dance Base classes, a certain tune with its namesake within the title is always played when a certain participant enters.

The musicians have fun with the music and this shapes the emotional, social and physical responses of the participants. Within a single Dance Base class, the following were played and danced to: Mazurka; 'We Like to Boogie'; 'Tomorrow'; 'Here Comes the Sun'; 'Fly Me to

the Moon'; Handel Mendelsohn; Claude Debussy. Within a Scottish Ballet class, in addition to the 'La Sylphide' score drawn upon, the following made an appearance: the 'Star Wars' theme tune, 'Scotland the Bruce', the Can-can, 'White Cliffs of Dover.'

The musicians may be based in the corner, playing, but they are very much part of the interactional whole. Musicians do not generally engage with team-playing in the same way that teachers team teach; it is important to note the benefit that they derive from being involved in DfPS. Other classes 'you could go a whole class and no-one would look at you – you're just in your corner. Just reacting in a dance way' (Derek Baron). All musicians join in the social time in the respective locations, understanding that this is when people may want to chat with them, and for those participants who have enjoyed particularly musical lives, to discuss the art form further.

7.5. Strengths of the Partnership

Practitioners and members of staff from both organisations spoke of the benefits of working in partnership, strengthening DfPS from within.

For Scottish Ballet, a key benefit of the partnership has been learning from the years of experience gained by Dance Base practitioners from working with people with Parkinson's. Key aspects of the Dance Base classes, the Settle (initial meditative and visualisation exercise) and Sun Salutation, have become woven into and are an integral part of the Scottish Ballet classes. Dance Base practitioners have also been able to access and draw upon Scottish Ballet's repertoire and extensive education experience with a two-way exchange of creative ideas flowing at regular meetings and training events.

Consistency and familiarity are an important consideration for the DfPS classes and with two organisations working together, expert staff are able to 'fill in' for one another. The pool at Dance Base is currently larger, reflecting the longevity of the focus on Dance for Parkinson's and during the data collection period, Suzi Cunningham and Sophie Younger from Dance Base worked alongside Miriam Early at Scottish Ballet, and on another occasion, musician Robert Briggs filled in for Derek Baron. Within Dance Base, staff are also able to 'cover' for one another. This depth of expertise is invaluable for contributing to the sustainability and longevity of the programme. All practitioners have undertaken the same training, are creative professionals maintaining their own integrity in practice, and understand one another's way of working. A relationship with participants from the partner organisation is maintained, ensuring some familiarity, and participants get to benefit from slightly different ways of working, keeping the format fresh and creative.

Although classes had been taking place at Dance Base since 2010, with the onset of the partnership, practitioners accessed more training opportunities, including training with David Leventhal in January 2016. Building on the previous format, through the funding now

in place, Dance Base has gained the means to fund refreshments and make the class free and weekly.

Participants from the Dance Base classes have had the opportunity to watch Scottish Ballet's dress rehearsal of 'Hansel and Gretel' and Dance Base practitioners have had the option to draw on the company's repertoire. Plans are also in place for staff from Scottish Ballet's education department to attend the Dance Base class and give a presentation on the work of the company to strengthen understanding of, and connection to, the ballet genre.

A particular highlight shared, is when both classes had the opportunity to dance together just before Christmas in December 2016: 64 people interacted and danced with one another in the Peter Darrell Studio at Scottish Ballet headquarters.

Both Scottish Ballet and Dance Base have benefited as organisations. Catherine Cassidy (Scottish Ballet) explains how DfPS

'has changed the company in ways I didn't expect. Our Parkinson's dancers bring with them a sense of honesty, commitment, joy and humanity which has touched and connected our teachers, performers, musicians and executive leaders in new ways.'

Significantly, 'The perception of what Scottish Ballet can offer has changed' (Catherine Cassidy).

6. Future plans and opportunities

Taster sessions

Moving forward, plans are in place for DfPS classes to continue to run at Scottish Ballet and Dance Base and, in addition, to support satellite groups in different locations around Scotland. Thus, aiming to counteract the natural challenges of Scotland's geography leading to a bias of activity concentrated in the central belt (broadly speaking, the area between Edinburgh and Glasgow). These satellite groups will receive initial training and ongoing support from core DfPS practitioners who will team teach with a local dance practitioner in each hub, developing the expertise of the latter.

Between February and June 2017, tasters were held throughout Scotland in Aberdeen, Dundee, Greenock, Inverness and Kilmarnock. Feedback collected by the practitioners, some of which is shared below, complements many of the opinions and sentiments that shape the current evaluation.

Enjoyment was linked to the following:

- *Having the choice to perform exercises seated.*
- *I am able to push myself and do things I didn't think I could.*
- *Meeting new people.*
- *Have movement and energy, more than I thought.*
- *Learnt about ballet.*
- *I feel lovely. Very emotional. Tired but please, please, please do it again.*
- *More confidence. Approach very positive. More able than I thought to participate.*
- *More enjoyable than other classes. Not out of depth. Perfect.*
- *Felt music helped me to flow. Moving helped me to find a rhythm.*
- *It's the first activity I've been to in ages where I could do everything.*
- *Nice to divert away from the thoughts/future of Parkinson's and escape.*
- *Very well researched*

Challenges and concerns were linked to the following:

- *Travelling movement – but a good challenge*
- *Memory sometimes difficult*
- *Feet and toes co-ordination*

In planning an expansion of the DfPS programme, it is important to note that the current evaluation suggests that a particular demographic of people are currently being reached, presenting an opportunity to strive for greater inclusivity: those individuals that participate are more likely to perceive their current quality of life as 'good' or 'very good', to have undertaken Higher Education, and to be participating in exercise-based activities elsewhere. It is also important to note that participants have actively engaged in their own fundraising

activities for the DfPS classes.

Upcoming events

In addition to sharing this evaluation with current stakeholders (including participants of the classes), there are a number of growing opportunities for dissemination of findings including:

- An invitation to be part of a panel discussion at the forthcoming People Dancing International Conference taking place from 3rd-5th October at Tramway, Glasgow.
- An invitation to present at the AGM of the Edinburgh branch of Parkinson's UK in March 2018.
- 'Scottish Physical Activity Research Connections (SPARC)' 2017 event hosted by the University of Edinburgh and the Active Scotland Division of the Scottish Government (pending abstract submission and acceptance).

9. Concluding Remarks

The Dance for Parkinson's Scotland (DfPS) pilot programme has paid clear dividends concerning the perceived cultural, social and physical benefits for, and from, the perspective of the participants with Parkinson's involved.

Participants, collectively, have a growing relationship with dance, inherently personal in nature, and one which for many is integral to the enjoyment of the programme. Participants have the opportunity to express themselves, to feel the movement, share and show their emotions, and to learn about the culture(s) of dance and ballet. The dancing, conversely, also acts as a key challenge, linked to both the multifaceted nature of the art form and to the symptoms of Parkinson's. Yet, it is this very challenge that, for many, leads to a valuable sense of achievement being felt.

Benefits are perceived across the spectrum of physical concerns investigated, including balance, confidence with movement, coordination, gait, flexibility, fluidity and posture. Although the participants themselves, in some case, shared within interviews that they find it difficult to quantify the benefits, statistical data strongly suggests that perceived benefits are felt. In particular, it has been illuminating to explore, together with a key theme that emerged from the perceived social benefits, just how central DfPS is to people's lives. Specific exercises and techniques have been woven into the physicality of living. Support networks deriving from, or strengthened by the classes, exist both within and outwith the classes. 'See dancing's taking over my life. Parkinson's isn't the problem. It's the dancing!' (Timothy, Dance Base). Although seemingly not the key motivations for joining initially, social and cultural enjoyment have emerged as key reasons for continued participation.

Through an analysis of the data, the below factors have emerged as instrumental to the perceived benefits felt and the high levels of attendance and adherence evident:

- The creation of an accessible and inclusive artistically physical activity, tailored to Parkinson's, which is also inherently cultural and social in nature. DfPS is 'different.'
- Dance practitioners and musicians with expertise and empathy who welcome two-way engagement and investment.
- The inclusion of live music.
- Determined and proactive participants who demonstrate high levels of self-efficacy and invest both in improving their quality of life and in the DfPS programme.
- A partnership involving two of Scotland's foremost dance organisations, facilitating ongoing and developing creative conversations, cultural and training opportunities, and the creation of a pool of expert facilitators.

DfPS signifies the commitment made by both organisations to facilitate high quality dance experiences with an inclusive ethos and makes a demonstrable difference to the quality of life for people with Parkinson's, their partners, and spouses.

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Appendices

Appendix 1: Summary of topics for semi-structured and group interviews

Individuals with Parkinson's

- Narrative of getting involved with the programme (method of referral)
- Overall experience of being involved with the programme
- Prior expectations
- Perceived physical benefits
- Perceived social benefits
- Challenges
- Support provided
- Relationship to the dancing
- Other physical activities engaged in
- Role of live music
- Relationship with ballet and dance
- Relationship with Scottish Ballet/Dance Base

Family and Friends

- Narrative of getting involved with the programme
- Overall experience of being involved with the programme
- Prior expectations
- Perceived physical and social benefits to the individual that they are supporting
- How they feel they benefit personally
- Challenges
- Relationship to the dancing
- Other physical activities engaged in
- Role of live music
- Relationship with ballet and dance
- Relationship with Scottish Ballet/Dance Base
- Support provided

Volunteers

- Narrative of getting involved with the programme
- Overall experience of being involved with the programme
- Prior expectations
- Perceived physical and social benefits to the individual that they are supporting
- How they feel they benefit personally
- Relationship to the dancing

- Other physical and cultural activities engaged in
- Role of live music
- Relationship with ballet and dance
- Relationship with Scottish Ballet/Dance Base
- Support provided

Creative Professionals (Dance Practitioners and Pianist)

- Narrative of getting involved with the programme
- Overall experience of being involved with the programme
- Training provided
- Development of class
- Development of teaching style
- Prior expectations
- Perceived physical and social benefits to the individuals with Parkinson's
- How they feel they benefit personally
- Role of live music
- Support provided by Scottish Ballet/Dance Base

Other Organisational Staff

- Story of how DfPS came into being
- Prior expectations
- Perceived physical and social benefits to the individuals with Parkinson's
- Perceived physical and social benefits to other groups of individuals involved
- Role of live music
- How they feel their organisation and staff have benefited
- Training provided
- Future plans

Appendix 2: Questionnaire issued to DfPS participants

Reference number: _____

Questions for Dancers!

You are the experts in this class! You have experienced and know in your own ways how Dance for Parkinson's Scotland (DfPS) affects you. We would like your input and ideas about how you think DfPS helps you and what keeps you coming back. The survey is intended to be anonymous and should take no more than 10 minutes.

Please read each question carefully. There are no right or wrong answers and your first thought is usually the best.

Many thanks for your input – we really appreciate your contribution!

1. Do you think DfPS helps you feel better?

Yes No

If yes, using the scale below and on the line before each item, please indicate the number you think best describes how much you think DfPS helps each of the following?

1 2 3 4 5

Not at all

A great deal

___ Improves motor symptoms

___ Improves mood

___ Increases a sense of well-being

___ Increases a sense of accomplishment

___ Helps me feel like my pre-Parkinson's self for a while

___ Gives me a sense of freedom

___ Helps me focus on something other than Parkinson's for a while

___ Other (please describe)

2. If you believe that the dance class helps you, how long do you think that benefits last? (Please check only one response)

- Until the class is over
- For a few hours
- A few days
- Until the next class
- A month
- A lifetime
- Don't know

3. What parts of the dance class do you think are most valuable to you? (Please check all that apply)

- Doing something creative
- Social interactions with other class members
- Participating in a group activity with others
- Doing something fun
- Being out of the house of a while and having someplace to go and something meaningful to do
- Connections with the teacher(s); knowing someone is interested and cares
- Feeling physically 'free' for a while
- Moving and getting some exercise
- Music
- Other (please specify) _____

4. Do you currently go to other exercise classes or groups?

- Yes No

If yes, how frequently do you go? (Please check only one response)

- More than once a week

- Once a week
- Several times a month
- Approximately once a month

What other classes or groups do you attend?

Do you think DfPS is different from other exercise classes you may have undertaken?

- Yes No

If yes, what do you think makes DfPS different?

5. Please rate the following statements based on how you think DfPS have affected activities that occur outside of the studio. If you're not sure, please mark '1' in the first column.

1 2 3 4 5
Not sure Strongly Disagree Disagree Agree Strongly Agree

- I perform at least one activity of daily living with more ease
- I perform several activities of daily living with more ease
- I have more confidence going about my daily activities
- I find it easier to get around the house.
- I trust my balance more when I'm out and about
- I'm able to think about movement more logically
- I integrate music and rhythm more fully into my daily life to help me get things done.
- I find myself thinking during the day about things my teachers say about posture.
- I find myself thinking during the day about things my teachers say about different qualities of movement (soft, sharp, floating).
- I find myself thinking during the day about images my teachers use in class to describe dance steps or movements.
- I'm able to move more fluidly
- I don't see much effect on daily activities.

___ Other: (please specify)_____

6. What, if anything, do you find particularly challenging about DfPS? (Please check all that apply).

- ___ The dance steps themselves
- ___ Doing a series of different movements in a set amount of time
- ___ Following sequences of movements
- ___ Remembering the sequences of movements
- ___ Staying on the beat
- ___ Being spontaneous during improvised exercises
- ___ Doing the exercises at the same speed as the instructor
- ___ Moving across the floor
- ___ Keeping my balance
- ___ Other (please specify):_____

7. Would you, or have you, recommended DfPS to others?

___ Yes No ___

8. My quality of life at present is: (Please check one).

[] Excellent [] Very Good [] Good [] Fair [] Poor

9. Please indicate how much you agree or disagree with each item by marking the appropriate number. (Check or circle one answer for each item)

1 = Strongly Disagree 2 = Disagree 3 = Not Sure 4 = Agree 5 = Strongly Agree

- | | | | | | |
|--|---|---|---|---|---|
| 1. Dancing makes me feel more energetic | 1 | 2 | 3 | 4 | 5 |
| 2. Dancing is mentally demanding and stressful | 1 | 2 | 3 | 4 | 5 |
| 3. Dancing improves my posture | 1 | 2 | 3 | 4 | 5 |
| 4. Dancing improves my gait | 1 | 2 | 3 | 4 | 5 |
| 5. Dancing improves my flexibility | 1 | 2 | 3 | 4 | 5 |

6. Dancing improves my coordination	1	2	3	4	5
7. Dancing improves my spatial awareness	1	2	3	4	5
8. Dancing improves my balance	1	2	3	4	5
9. Dancing improves my confidence in movement	1	2	3	4	5
10. Dancing increases my negative mood	1	2	3	4	5
11. Dancing improves my activity tolerance/endurance	1	2	3	4	5
12. Dancing does not motivate me to be more active	1	2	3	4	5
13. Dancing gives me a great feeling of togetherness	1	2	3	4	5
14. The prescribed movements are difficult to perform	1	2	3	4	5
15. Dancing increases my self-confidence	1	2	3	4	5
16. Dancing helps me to feel more in control of my life	1	2	3	4	5
17. Dancing increases my sense of isolation	1	2	3	4	5
18. Dancing makes me happy/brings me joy	1	2	3	4	5
19. Dancing takes me out of myself	1	2	3	4	5

Demographic information

When did you join Dance for Parkinson's Scotland?²

April – June 2016

Jul – Sep 2016

Oct – Dec 2016

Jan – Mar 2017

How frequently do you attend? *(Please check one response).*

___ Every week (on average)

___ Every two weeks (on average)

² The options offered in response to this question differed for Dance Base and Scottish Ballet participants as an earlier incarnation of the classes had been running at the former organisation and many participants continued to participate through DfPS.

___ Once a month (on average)

What year were you first diagnosed with Parkinson's? _____

Age: ___

Gender: ___ Female ___ Male

What is the highest level of education that you have completed?

[] High School/Secondary School

[] College/Further Education

[] University/Higher Education

[] Other

[] Prefer not to say

Before DfPS, had you ever taken dance lessons of any kind at an earlier time in your life?

___ Yes ___ No

How did you find out about Dance for Parkinson's Scotland?

Thank you very much for your help today and for filling out this survey!

Appendix 3: Schedule for data collection

Data collection at Scottish Ballet

<i>Date</i>	<i>Participants</i>	<i>Method</i>
13 th March	All	Observation
20 th March	All Evangeline* Deborah*	Observation Interview Interview
27 th March	All Grant* Laura and Stephen*	Observation Interview Interview
3 rd April	All Participants with Parkinson's (PwP) Rose*	Observation Questionnaire Interview
12 th April	All PwP Grant*	Observation Questionnaire Interview
13 th April	Miriam Early and Hayley Earlam	Interview
15 th April	Ben and Mary*	Interview
24 th April	All PwP Josie* Derek Baron	Observation Questionnaire Interview Interview
8 th May	All	Observation Questionnaire

Data collection at Dance Base

<i>Date</i>	<i>Participants</i>	<i>Method</i>
22 nd March	All Allan Irvine	Observation Interview
29 th March	All Emily* Robert Briggs	Observation Interview
5 th April	All Participants with Parkinson's (PwP) Paul* Gordon Reynolds	Observation Questionnaire Interview Interview
14 th April	All PwP Jen Cunningham	Observation Questionnaire Interview

26 th April	All PwP Elaine*	Observation Questionnaire Interview
3 rd May	All PwP Neil* Timothy and Anna* Sophie Younger	Observation Questionnaire Interview Interview Interview

* Denotes the use of pseudonyms.

Appendix 4: Parts of the DfPS classes that are most valuable

(Table 8)

<i>Statement</i>	<i>Percentage of respondents who responded</i>	<i>No of responses</i>	<i>(n=42)</i>
Moving and getting some exercise	95%	40	
Participating in a group activity with others	95%	40	
Social interactions with other class members	90%	38	
Doing something fun	86%	36	
Music	74%	31	
Connections with the teacher(s); knowing someone is interested and cares	62%	26	
Doing something creative	55%	23	
Being out of the house of a while and having someplace to go and something meaningful to do	50%	21	
Feeling physically 'free' for a while	50%	21	

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