**Appendix 6**

***“I never thought I could do that…”***

**Outcomes from an Alexander Technique pilot group for older people with a fear of falling**

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**Background**

Fear of falling is both a predictor of actual falls and a cause of inactivity and social withdrawal, with all the attendant physical and psychological issues relating to these. There is no clear evidence as to the most effective approach to managing fear of falling except that there seems to be a need for both a psychological and physical intervention. The Alexander Technique (AT) is a self-management approach which can help people to develop the ability to co-ordinate themselves quickly and efficiently in any situation thus allowing improved balance and movement. In addition it can build confidence and increase a sense of wellbeing. It is acceptable to individuals and is used in the long term by those who have learnt it. The AT therefore has the potential to provide a much needed holistic approach to address fear of falling which presents a major risk in the older population.

This small-scale pilot study, funded by Hull NHS Clinical Commissioning Group, had the primary aims of investigating outcomes following a pilot AT group intervention for older people with a fear of falling. A secondary aim was to explore feasibility and acceptability of the AT delivered in a group format.

**The study**

The AT group consisted of 6 twice weekly sessions followed by 6 weekly sessions each lasting 1½ hours with a 10 minute break and refreshments provided. Participants were invited to arrive up to half an hour before the group started for refreshments, socializing, and to have an opportunity to speak with the AT teachers. Participants were encouraged to discuss any falls/near falls/health issues that might have occurred between sessions. Group sessions consisted of a mixture of teaching, experiential work, practical exercises, skills practice and discussion. The group sessions aimed to help participants develop the key elements of the AT and apply them to their own individual situations. The emphasis was practical and experiential throughout. Session content is summarized in Table 1.

Quantitative measures were administered four weeks prior to the group starting (baseline), at the start and end of the group, and at four weeks follow-up. The questionnaire pack included the Falls Efficacy Scale – International (FES-I), Short Form Berg Balance Scale (BBS), Short Form Geriatric Depression Scale (GDS), and the Short Form Health Survey – 12 (SF12). Participants were also given a demographic questionnaire at the beginning of the group and a course evaluation at the end of the group. Between the end of the group and follow-up, participants were invited to take part in one of two focus groups discussing the group and the AT. Seven participants took part in the focus groups.

Ethical approval and permission was obtained from the University Faculty Ethics Committee

**Data analysis**

Descriptive statistics were used to describe the sample. As the quantitative data were not normally distributed, Friedman’s tests were used to examine if there were differences for participants between time points. As two participants missed a third or more of the sessions, they were excluded from the quantitative data analysis. For each of the measures used, only those participants who completed the questionnaires at all four time points were included.

Focus group interviews were recorded and transcribed verbatim. Data were analysed using thematic analysis by two of the research team.

**Demographics**

Eleven women and one man (aged between 65 and 86) took part and all twelve completed the group. They had a range of issues relating to fear of falling including, balance, vertigo, pain, history of falls, family experiences, anxiety, mobility issues.

**Quantitative results**

Mean scores for the outcome measures are given in Table 2. No significant difference was found on the FES (n=9, p=0.991), the SF-12 physical component (n=7, 0=0.319), or the SF-12 mental component (n=7, 0.856) between the time points. The GDS scores were significantly lower at the post-group and follow-up time points (n=8, p=0.030), however the mean GDS scores were below a clinical threshold throughout the four time-points. The SF-12 showed a possible trend towards improvement over time in both the MCS and PCS, but this was not statistically significant. Only four people completed the BERG at all four time points, so this was not analysed.

Five participants fell during the group. Two participants each fell once (one during week 9 and one in week 10), one participant fell three times (during weeks 8, 9, and 10), and one participant fell five times (during weeks 5, 9, 10, 11, and 12) but described four of their five falls as ‘tripping’ or ‘stumbling’ and it was not clear whether these were actual falls or near-falls, but they have been counted as falls. At follow up, this last participant was the only one to have fallen since the group finished.

**Qualitative results**

There were a number of findings related to the experience of the AT and outcomes after attending the group (quotes are in italics).

Experience of the AT

Participants described finding the AT difficult to understand at first, particularly as the ‘non-doing’ aspect was different to exercise classes or physiotherapy that they had done before.

*Because I’ve done yoga and that sort of thing and I couldn’t understand why there were no specific exercises apart from really the few. No, it was…it was a bit difficult for me to understand what it was about. (P12)*

But participants also said it made sense through doing:

*Once you’re really into it, actually it made sense. Because you’re going through the body and learning about the body and how it related. (P6)*

And that they enjoyed learning it:

*“…because we did, we had fun, didn’t we?” (P2)*

Perhaps because it was difficult to understand at first, participants said they enjoyed the concrete aspects of the group such as learning about the bones using a skeleton, and the verbal cues used to help them remember to use AT in their everyday life.

*And what they’re saying to you is, ‘feel where your body sits,’ and immediately, sitting bones, where’s your knees and your ankles and two feet and the three places on your feet. And once you sort of know that that’s how you have to sit, your body changes its position. (P2)*

Participants described incorporating AT into their routine and everyday tasks such as walking and shopping:

*P6: Especially in the morning first thing, very important. Sit there, ‘not getting up yet’. [laughs] Right. And then it just happens, you know, and you get going.*

*P4: It is habit forming isn’t it?*

The ‘stopping’ aspect of the AT was described as particularly useful by participants. They discussed finding it helped to deal with worries, manage physical activity, and stop falls.

*…in that you’ve got to stop and ‘right, I’m going upstairs and I have got these horrible shoes on, but I’ve still got to go up and down stairs’ and then when you stop, then you can think to lift your feet just that little bit higher. Yes. And going down curbs, that’s when I’ve got to stop, stop, and then go down the curb. (P11)*

Outcomes

A number of physical improvements were identified, including improvements in sitting, standing, laying down, using the stairs and in other health problems. Participants also described improvements in their mood, confidence and stress, and changes in their ways of being following the group.

Participants described a greater level of awareness of their surroundings, of how they did tasks, and of their own practical limitations.

*…it’s made me aware of where I do this tripping which is over the sill in the house. (P12)*

*I’m very aware of it when I’m pushing a supermarket trolley, doing that. Am I using anything too much, you know. (P11)*

*I think a bit more about doing things, I’m a bit slower about doing things, but that’s good. I find it good anyway. (P8)*

There seemed to be a change of attitude with an acceptance of limitations and a discovery that they had found new ways of doing things.

*On a night I used to say ‘I can carry them through. I can…’ you know, because I had to prove that I could do it. Now I think [shrug] (P4)*

*I can’t run as fast or I can’t walk as fast as other people, but I don’t let that worry me now. (P12)*

*We don’t have to do it all for ourselves. (P2)*

The combination of increased awareness and attitude change led to a sense of empowerment.

*Yeah, I think it has with me. I won’t let people bully me. Not that people…I won’t be rushed, that’s what I meant. I won’t be rushed. (P12)*

*Don’t help me off the bus, let….make me get off on my own. (P14)*

*Well I never thought I’d be able to get down on the floor and lay on the floor but I actually have. (P14)*

One participant summed up what they felt after the course when they put together what they had learnt.

*I am happy with what I am able to do, yeah. And I don’t kind of think so much like “oh gosh I can’t do that because it’s going to be difficult”. I just go and do it and I can manage it, you know? Because I can… I do have my stops and things. (P6)*

**Feasibility results**

There was no attrition despite the fact that the group was run during the winter months with poor weather conditions. Ten of the participants said they thought 12 sessions was ‘about right’, and two thought it was ‘too few’. Eleven participants said that 1½ hours per session was ‘about right’, and one said it was ‘too short’. Ten participants felt twice weekly then weekly was ‘about right’, one felt it was ‘too often’, and one felt it was ‘too spread out’.

As discussed above, participants said they initially found the AT difficult to understand as it was different from exercise classes or physiotherapy they had done before, but that it made sense through doing it, and that they enjoyed learning the AT and the sessions.

**Discussion**

There is a need for a holistic approach to fear of falling and the focus group results show the holistic nature of the changes following the group. Learning the AT enabled the participants to learn more about themselves and to experience themselves in a more holistic way. They developed both a clearer sense of their physical selves and the way they moved, and an ability to release unnecessary tension. This helped not only with balance but also with confidence and general activity.

Participants reported gaining the confidence and practical skills to do things they had previously not thought possible (from lying on the floor to stepping off the bus alone), but at the same time accepting that they were more limited than they previously acknowledged in other areas of their life (such as not walking as quickly or carrying as much). This readjustment of their personal boundaries, increasing and decreasing in different areas, with an acceptance of those boundaries, seems an important finding. Firstly, that participants were able to increase their activity as a result of learning AT is promising given that fear of falling often leads to a reduction in activity and subsequent social isolation. Secondly, through acting within their limitations, such as by carrying less, people may be less likely to fall. Additionally, accepting a change in what you are able to do as you age or your health deteriorates is not easy. Heckhausen, Wrosch and Schulz’s (2010) motivational theory of lifespan development suggests people must let go of what they can no longer do, but also work to their strengths (both personal and environmental). The AT group appears to have enabled participants to do this.

Although participants found it difficult to grasp the AT initially, they did gain understanding as they continued with the group and ended up enjoying the process of learning. Participants were confident that they would continue using the AT. Because their learning was at a level of principles which they could apply rather than exercises to do, they were able to employ their learning to a range of situations not necessarily directly covered in the course. It appears that for this group, improved mobility and function was facilitated by attention to process, along with the provision of a safe environment and encouragement to explore movement.

The quantitative findings are inconsistent with the changes reported in the focus groups. A larger scale study would address the issues of power, and further work in this area should use different measures including a more sensitive balance measure, possibly an efficacy measure (self-efficacy and not falls efficacy), and video-taping. It may also be useful for further research to include measures, or specifically ask focus group questions, which examine any changes in general, holistic wellbeing.

**Conclusion**

Findings from this small scale pilot study suggest that:

* The AT group appears to offer a holistic intervention which has an impact on falls-related, and more general, physical skills, and psychological well-being.
* Following the group participants appeared to be more able to accept and develop their personal boundaries around activity.
* The AT is a useful intervention for older people in terms of helping them negotiate some of the limitations imposed by ageing.
* The feasibility of the group is supported by having good attendance, no attrition and by the group participants’ reports of enjoying the group.
* Future work should involve larger numbers of participants and more specific and appropriate outcome measures.
* This pilot study suggests the AT should be investigated further as an intervention for fear of falling and indicates its possible potential as a way of increasing wellbeing in older adults.

***Table 1.* Summary of session content**

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| The group sessions aimed to help participants to develop an understanding of, and skill in, the key elements of the AT and to be able to apply these to their own individual situations. They consisted of a mixture of discussion and explanation, experiential work, practical exercises, and practice. Some ‘hands on’ was used included in each session. ‘Hands-on’ is a form of touch used by AT teachers “to access and communicate non-verbal implicit information; to increase proprioceptive awareness and facilitate neuromuscular co-ordination” (Stallibrass & Hampson 2001, p. 13).  Areas covered were:   * recognition of unhelpful habits (these could be habits of movement, tension, cognition or behaviour) * ‘Inhibition’ and non-doing - developing the ability to interrupt habitual responses, to increase presence, and to provide an opportunity to make choices in a situation * widening awareness of both self and surroundings * learning about musculo-skeletal living anatomy to enable more accurate internal representations and thus increase the possibilities for normal movement with reduced effort * ‘direction‘ - employing cognitions to facilitate movement and responses with greater ease   A key idea in the AT is that the combination of inhibition and direction allow better functioning of the integrated and dynamic relationship between the head, neck, and spine making it possible to move and respond with better coordination and balance, and less effort and unnecessary tension.  In the majority of sessions participants:   * practised ‘active rest’ – an exercise done lying in semi-supine which encourages alignment of the head, neck, and back and provides an opportunity to practise ‘inhibition’ and ‘direction’ * considered applying the AT skills they had learned to everyday tasks. |

***Table 2.* Mean scores of outcome measures**

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| Measure | Time point | Mean (S.D.) |
| FES | Baseline | 38.90 (11.41) |
| Pre-group | 37.10 (11.25) |
| Post-group | 37.40 (14.26) |
| Follow-up | 34.20 (13.75) |
| SF-12 PCS | Baseline | 39.53 (9.43) |
| Pre-group | 39.62 (10.52) |
| Post-group | 41.06 (8.21) |
| Follow-up | 44.12 (6.90) |
| SF-12 MCS | Baseline | 48.51 (8.02) |
| Pre-group | 43.98 (10.21) |
| Post-group | 45.28 (12.83) |
| Follow-up | 45.84 (7.52) |
| GDS | Baseline | 3.33 (2.83) |
| Pre-group | 4.00 (2.83) |
| Post-group | 3.00 (2.74) |
| Follow-up | 3.00 (2.35) |
| BBS | Baseline | 23.00 (4.16) |
| Pre-group | 25.00 (2.58) |
| Post-group | 24.50 (3.42) |
| Follow-up | 26.00 (1.63) |

***Table 3.* Quotes relating to specific outcomes following the group**

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| **Physical outcomes** |
| I feel I’m sitting better (P8)  I find the stairs a hell of a lot easier than I did (P2)  I can go and hang out the washing now without a walking stick (P14)  [P3] slept better than he has for a long time (P11)  I recently got problems with my back and…it really made a difference (P6) |
| **Ways of being** |
| I feel more in contact with the ground somehow (P8)  Much calmer, not so agitated (P6)  It’s taught me to…. turn off the bits you don’t need to use (P2)  Makes you feel quite strong somehow (P8)  It doesn’t take away… you’ve still got that bit of apprehension there…. And I think if you didn’t have, you’d forget to do it…. (p11) |