



SKILL RETENTION STUDY

Retention of skills learnt in Alexander technique lessons: 28 people with idiopathic Parkinson's disease

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Abstract The Alexander technique is a preventive, re-educative, self-help technique for improving the efficiency of overall balance and co-ordination. This paper describes the responses to a questionnaire completed by a sample of 28 people with idiopathic Parkinson's disease six months after receiving a course of lessons as participants in a controlled trial. It is the first time that retention of skills has been investigated in relation to learning the Alexander technique.

Twenty-seven people (96%) said that they were continuing to use the Alexander technique in their daily life; most often while walking, sitting or standing. Twenty-four people (86%) were also practising the Alexander technique while lying down in a semi-supine position. Ten people (36%) were using the Alexander technique when they needed more control especially in crowds and social situations and seven (25%) in stressful situations.

The responses show that every participant retained some degree of skill; at the same time the responses indicate a wide variation in level of commitment and application.

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The Alexander technique

What is the Alexander technique?

The Alexander technique is a preventive, re-educative, self-help technique developed in the

early 1890s by Frederick Alexander (1869–1955) to improve the efficiency of our overall balance and co-ordination. Alexander's innovative approach was based on the understanding deduced from observation of himself and his pupils that the physical and the mental are not separate processes (Alexander, 1985, original publication 1932). He called this psycho-physical unity (Alexander 2000, original publication 1941). The Alexander technique can be learnt and applied alongside many therapies,

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including drug treatments and therapies that use manipulation, such as chiropractic.

Pupils of the Alexander technique learn how to change their unconscious habitual responses to stimuli by applying a set of conscious strategies. They learn to consciously inhibit rushing into action (called inhibiting). They also learn how to consciously organise themselves prior to action and during action (called directing) so that movement is led by the head. In particular, they learn how to re-organise the balance of the head in relation to the rest of the body in order to lessen the effort needed to stay upright in gravity. Alexander observed that the ability of the head to lead is dependent upon a particular head-neck-back relationship which he called the primary control (Alexander, 1985). As balancing becomes more efficient, excessive muscular tension is reduced throughout the whole body (Tobias, 1988). The pupils also learn to lay aside their desire to be guided in movement by how they expect it to feel (called end-gaining); but instead to be concerned only with the process (Alexander, 1985, 2000).

The teaching method

In general the Alexander technique is taught individually and the method is highly interactive. During simple activities the teacher observes the pupil's behaviour and uses proprioceptive cues to assess the pupil's reactions. Proprioceptors are the nerve endings that monitor internal changes in the body brought about by movement and muscle activity. The teacher's hands are in contact with the pupil during most of the lesson. This helps the teacher to sense the effects of the pupil's thinking on the pupil's balance and co-ordination. By these means the teacher can monitor the effectiveness with which the pupil is inhibiting and directing and can give

verbal feedback as appropriate. Change in the pupil is also facilitated by the teacher's own simultaneous directing and inhibiting communicated primarily through manual contact. This constitutes the basic teaching method. Also addressed during lessons is the human response to gravity, anatomical body-maps relating to relevant movements and development of the pupil's sensory appreciation of themselves.

The structure of lessons

The two main traditional activities during which inhibiting and directing are practised in lessons are moving from sitting to standing and moving from standing to sitting. Learning to balance with less effort while moving closer to and further from the floor gives confidence to use the Alexander technique in a range of other activities, such as lifting, picking items up from low surfaces, gardening, reaching and so on. In most lessons inhibiting and directing are also practised while lying down on the floor or on a teaching table in a semi-supine position (see Fig. 1).

The pupil lies with their knees bent and their head (not the neck) supported by books (Fig. 1). In this position there is minimal distortion of the curves of the spine compared to lying flat or standing or sitting and the balance of the head is relatively forward on the atlanto-occipital joint. This allows gravity and the effects of inhibiting and directing to encourage the back to lengthen and widen. The discs between the vertebrae, including those of the neck which are freely poised in space because the head is supported on books, are gently teased apart and absorb more fluid (Maroudas and Stockwell, 1975). The weight of the arms and legs are supported by the floor or the table such that the large superficial muscles of these limbs that wrap around the neck and back are encouraged to



Adapted from Glen Park 1989

Directing - thinking in ways that are designed to encourage the head to lead in activity, through a head-neck-back relationship, that encourages efficient co-ordination

Inhibiting - consciously refusing permission to make habitual responses

Figure 1. Position of lying on a floor/table in semi-supine.

release from their habitual patterns of contraction. Consequential beneficial effects include the likelihood of less constricted respiration and freer movement of the internal organs and the joints.

Background to this study

Alexander technique research to-date

To-date research into the Alexander technique has focussed upon its effectiveness for improved performance, improved physiological functioning such as breathing, and, the reduction of pain, particularly back pain (Dennis, 1999; Stallibrass et al., 2002; Austin and Ausubel, 1992; Vickers et al., 1999). There is no published research in the field of skills retention. Published first person accounts of learning the Alexander technique have focussed on teaching method and the pupil's response during the lesson itself (Binkley, 1993; Jones, 1997; Robb, 1999). This paper explores how the skills learnt in lessons were used later in everyday life.

Aim of this study

The aim of this paper is to make available, for the first time, information from a group of people about the way they perceive themselves to be applying the Alexander technique in their everyday lives after lessons have ended. The information is from the responses to a questionnaire about the ways in which the Alexander technique was being applied six months after lessons ended by a sample of 28 people with idiopathic Parkinson's disease.

Parkinson's disease

The core diagnostic features of Parkinson's disease are tremor, rigidity, impoverished movement and postural instability (Pentland, 1999). Impoverished movement typically shows in reduced facial expression, small handwriting and reduced arm swing (Derbyshire and Marsden, 1999). Other features include tiredness, pain, impaired speech and swallowing, and apathy. Parkinson's disease is a progressive disorder of the central nervous system: impairment and disability gradually worsen. It is considered a disease of later life although an estimated one in seven is diagnosed before they are forty years old. (Oxtoby and Williams, 1999).

The earliest signs of disability in people with Parkinson's disease often occur in walking. Difficulties with balance, a shorter stride, tiring more easily and being slower are particularly noticeable

aspects. Sitting down in an uncontrolled manner and struggling to get up from soft seating are also commonplace signs of Parkinson's disease. Problems with sitting can be annoying in private and humiliating in public. Fatigue is also a feature of Parkinson's disease that often shows itself early in the progression of the disease. In a recent study 61% ($n = 202$) found tiredness 'very difficult' (Friedman and Friedman, 2001).

Sometimes people with idiopathic Parkinson's disease are seen as being primarily in one of two diagnostic groups: those whose main symptoms feature considerable rigidity but little tremor and those with moderate, severe or marked tremor and little rigidity. At the same time a characteristic of Parkinson's disease is the variety among individuals in the pattern of symptoms.

The design of this study

The scope of the questionnaire

The questionnaire, referred to as the Use Questionnaire, was designed to trigger memory and to provide internal checks on consistency of response. The responses to six out of the seven questions in the questionnaire (response rate 100%) have not previously been analysed or reported. These questions were:

- If you still think about the Alexander technique and use it in daily life can you describe the general situations in which you use it?
- Have you used it on particular occasions?
- What ideas do you use or remember?
- What directions do you still use?
- If you use lying down in semi-supine how often do you do so?
- Has the process of inhibiting and directing influenced your existence in other ways?

The objective of these open-ended questions concerning skill retention was to build up a picture of how, when and where pupils perceived themselves to be applying the Alexander technique after lessons had ended.

Who participated?

Twenty-eight people with idiopathic Parkinson's disease were asked to complete the questionnaire six months after they had received 24 individual lessons in the Alexander technique. They had received these lessons as part of a randomised controlled trial to evaluate the Alexander

technique and management of disability in idiopathic Parkinson's disease (Stallibrass et al., 2002). The findings in the controlled trial were that this group showed improvement compared to the control group that had no lessons, both immediately after the course of lessons and six months later. The trial has been described as methodologically sound and clinically relevant (Ernst and Canter, 2003). The data in the responses to the questions listed above were additional to the outcome measures of the controlled trial and have not been published previously.

Characteristics of the participants

The average age of the 28 people who completed the course of 24 lessons in the controlled trial was 64.1 years and the average duration of illness since diagnosis by a consultant neurologist was 4.8 years. They were all able to climb 20 stairs and to lie on the floor and get up alone although in several cases with a great deal of difficulty (and with help from furniture). Thirteen people had noticeable tremor—rated as moderate (12 people) or severe (one person) on the five point scale for tremor in the United Parkinson's Disease Rating Scale. Tremor in the remaining 15 people was rated absent or slight/infrequent.

Lesson content in this study

The main activity traditionally used in lessons—moving from sitting to standing and standing to sitting—was used in every lesson, on average for around ten minutes (in a 40 min lesson). Sometimes to accommodate pain or fatigue in the pupil the length of time would be reduced to 5 min or less. Walking was used in every lesson and it was usually used for longer than moving from sitting to standing and standing to sitting. This was partly because walking was of primary concern to every person in the group. But equally important was the clarity with which the pupil while walking could experience the activity of her/his mind as it influenced movement and balance. Hence walking was used from the first lesson, to encourage the pupil's interest in learning the Alexander technique and to increase the confidence of pupils in psycho-physical strategies.

Strong feelings, positive or negative, increase the likelihood of tightening the neck muscles and pulling the head back on the spine, which interferes with balance. With Parkinson's disease strong feelings commonly include fear of performing activities less well due to tremor, rigidity or

weakness. Hence activities used to practise directing and inhibiting in lessons often included those activities that caused stress or panic in everyday life for a particular pupil due to fear of performing badly.

Inhibiting and directing to reduce tension that impeded breathing was practised with all pupils in one third to one half of all lessons; partly because freer breathing is relevant to speech impairment in Parkinson's disease, partly because some pupils were very rigid in the chest and neck areas and partly because working with breathing is traditional in Alexander technique lessons. Applying the Alexander technique to speaking was practised with individual pupils who were concerned about speech impairment. Immobility of the facial expression muscles is a widespread feature of Parkinson's disease and all pupils practised applying inhibition and directing to improve facial mobility at some point in the course of lessons. Eleven pupils practised applying inhibiting and directing in various ways for the management of their tremor.

All pupils were given guidance on lying down in the semi-supine position during the first lesson. This included a sheet of written notes. They were encouraged to practise in this position at least once a day for 10–15 min (Ness, 2001). The effects of using the semi-supine position are often felt as relaxing by the pupil but when combined with conscious thought to encourage change, the effect is one of releasing inappropriate tension and improving co-ordination through the whole body (Leibowitz and Connington, 1991). This leads to freer breathing and movement of the soft tissue as well as the joints.

Pupils were also given small slips of paper with information in note form on applying inhibiting and directing during particular activities. At the end of the course each pupil was sent an audio-tape to guide the pupil's thoughts while lying down in a semi-supine position and while sitting (Stening and John, 1998).

Coding and classifying the responses to the Use Questionnaire

The responses were analysed by an independent researcher with a postgraduate degree in complementary therapies and training in qualitative methods. The responses were typed up and the text was indexed wherever an activity was mentioned during which the Alexander technique was used or a reason was given for using it. (Many of the activities and psychological effects mentioned in the responses to the Use Questionnaire were similar

to aspects mentioned in an earlier separate open-ended questionnaire concerning benefits from the lessons, which had been analysed and coded by the same researcher as part of the controlled trial.) To check for inter-rater reliability in the coding of the responses to the Use Questionnaire, the exercise was repeated by another researcher using the same classification system. The results were mainly the same; the few areas of differing interpretation of the text were discussed and a consensus reached. For the purposes of easy assimilation of results a set of composite categories derived from the larger list of classifications was agreed for use in the summary tables.

Results and discussion

Use of the Alexander technique during everyday activities

Walking mentioned by 18 (64%) and sitting mentioned by 12 (43%) are activities performed throughout the day, providing frequent opportunities to practise inhibiting and directing. Sometimes it is easier to practise mental strategies when alone and some pupils mentioned using it when walking recreationally.

The other activities listed in Table 1 with fewer numbers of mentions by respondents may reflect the fact that the activities were used less often than walking or sitting during lessons, but more importantly, the number of mentions may reflect the fact that fewer people in the group experienced disability in these activities. More control

Table 1 Use Questionnaire: use of inhibiting and directing during activities commonly affected by Parkinson's disease, six months after lessons ended.

	Number of pupils ($n = 28$)
While walking/getting started walking	18
While sitting/getting up from a chair/sitting down	12
For breathing	7
For speaking	6
While rolling over to get up from floor/out of bed	5
For facial mobility	3
For manual dexterity/handwriting	3

Table 2 Use Questionnaire: use of inhibiting and directing for general features of Parkinson's disease, six months after lessons ended.

	Number of pupils ($n = 28$)
To relax	12
To improve posture/ balance	8
To relieve rigidity/muscle tension/stiffness	8
To reduce pain	3
To raise energy/reduce tiredness	3
To manage tremor	3

over quality of performance of these activities was, however, important to those pupils who were affected.

Use of the Alexander technique for general features of Parkinson's disease

Eight people (29%) applied the technique to improve their posture (see Table 2). A less upright stance, forward from the hips, is a fairly common feature of Parkinson's disease that is often noticed by carers and friends. One pupil wrote that Alexander technique ideas were being used "to try to offset the wretched stoop" and another "to prevent slouching". Three more wrote that they used it to reduce shuffling.

Eight people (29%) wrote that they used Alexander technique thoughts to relieve muscle tension. One of these explained "When my face is tense and rigid I release my jaw and soften my mouth". Application of the technique to manage tremor was mentioned by three people. One of them wrote that she still used directing for "letting tremors move from one part of my body to another and peter out".

Twelve people (43%) said that they used the Alexander technique to relax. This is consistent with the fact that 16 people (57%) were lying down in the semi-supine position almost every day or even more often (see Table 3). One pupil wrote that lying in a semi-supine position is done "whenever possible, especially when physically exhausted and need to relax".

However, relaxation can also be achieved by applying the Alexander technique during activities. In answer to the question "Have you used the Alexander technique in particular situations," one pupil replied "yes, relaxing shoulders and back

Table 3 Lying on the floor in semi-supine to practise the Alexander technique six months after lessons ended.

Frequency	No (%) (n = 28)
7 or more times per week	9 (32)
5–6 times per week	7 (25)
2–3 times per week	8 (29)
Never	4 (14)
Total	28 (100)

when sitting up for some time such as at the theatre or on a journey”. Another wrote that they used “relaxation techniques whilst walking”.

Lying down in the semi-supine position

Twenty-four people (86%) were still lying down in the semi-supine position and ten people (36%) were practising the Alexander technique in this position at least once every day. Eight people (29%) mentioned directing while in this position, three of them using the audio-tape (Stenning and John, 1998) mentioned above.

Use of the Alexander technique for help with psychological effects of Parkinson’s disease

Four people (14%) stated that they regularly used the technique to reduce stress or panic (Table 4). Of the four who mentioned using it to reduce stress in life, one also mentioned applying it to reduce their tendency to rush at things. Another wrote that it increased their self-confidence as well. A fifth participant, who did not mention using it for reducing stress, wrote that it both increased her confidence and reduced her tendency “to get in a rush.” Two more wrote that they applied the technique to reduce rushing; this adds up to one quarter of pupils (seven pupils out of 28) making ten mentions of these related attitudinal/psychological reasons for applying the Alexander technique.

One pupil said that using the Alexander technique made her “determined not to give up” and one who mentioned it reducing stress said that it also helped her to “accept Parkinson’s better.” It can be supposed that as change occurs through the whole psycho-physical self, there is likely to be a beneficial increase in control over emotional as well as physical response to stimuli through inhibiting and directing. Such a relationship was explored recently in a small sample of Alexander

Table 4 Use Questionnaire: use of inhibiting and directing for emotional effects of impairment in Parkinson’s disease, six months after lessons ended.

	Number of pupils (n = 28)
To cope with panic/stress/apprehension	4
To encourage stopping/less rushing	4
To increase confidence	2

Table 5 Use Questionnaire: use of inhibiting and directing to help with quality of life, six months after lessons ended.

	Number of pupils (n = 28)
To be better in crowds/at social events	6
To have more control	4

technique teachers in psychotherapy (Saunderson, 2003).

Use of the Alexander technique for improved quality of social life

Using the Alexander technique to become more in control in general or for feeling better in social situations and crowds was mentioned by ten pupils in total (36%) (see Table 5). One pupil replied that she used the Alexander technique in “social occasions in a group, in conversations with friends and similarly in one to one exchange.” One pupil replied to the question about use in particular situations “If I’m eating out with friends I’m more conscious of my movements and try to use the Alexander technique to conceal my clumsiness”.

Directing and inhibiting

Anecdotal reports have found that pupils can be applying the Alexander technique effectively during a course of lessons without being able to give definitions of technical terms such as inhibiting and directing (see Table 6). It has also been said that during a basic course of lessons most pupils are focussed on learning to be able to manage their presenting symptoms, such as pain, and do not

Table 6 Use Questionnaire: conscious mental strategies mentioned by five or more pupils six months after lessons had ended.

	Number of pupils (<i>n</i> = 28)
Being aware of the self in space including support of ground	13
Directing the back (including the pelvis) to lengthen and widen	9
Directing the head to lead the rest of the body in movement	6
Inhibiting	5

become interested in the principles of the technique until later (Dewey, 1923).

Directing is consciously asking for awareness of particular spatial relationships among parts of the body as a whole in relation to space and the external environment. Directing as an activity is based on a concept of the self as a psycho-physical unity, such that the mind is not separated from the body or from the individual's activities. "The world out there and what I do to find myself in that world cannot be separated.... The process (of cognition) makes the two totally interdependent" (Varela, 1999). Directing to be aware of oneself in space can take many forms, but one of the most common during these lessons, frequently practised while walking, standing and turning, was consciously including in one's attention, awareness of the space behind oneself, above the head, below and behind the heels and to the sides of the upper-arms. This directing strategy was mentioned by 13 people (46%). Nine people who mentioned directing in this way were among the 18 (64%) who mentioned using the Alexander technique while walking.

The number of people, five (18%), who said that they used inhibiting might seem low given that inhibiting is a necessary precondition for effective directing (Alexander, 1985) (Carrington, 1999). But as mentioned above, it is possible that some people were inhibiting in particular situations, without being aware of the technical term. In particular the four people who mentioned stopping more and rushing into things less were actually inhibiting although they did not use the term. The three people who mentioned using the reminder cards would also have been inhibiting if they followed the instructions, but again none of them mentioned the technical term.

Summary and conclusions

Each of the pupils in the sample was still using skills they had learnt during Alexander technique lessons six months after the course had ended. The scope of application varied greatly, from application in one activity only (walking, breathing, lying in the semi-supine position) to comprehensive use of the Alexander technique as a way of organising their daily lived experience. As one of the latter wrote "Influences are wide-ranging and cover physical aspects of day to day living. You tend to think and direct when painting a door, pruning a tree or sitting on the floor to communicate with a grandchild." Most pupils were in the middle range; they were consciously using more than one strategy in the performance of several different important daily activities. In addition, close to one third of the group mentioned beneficial psychological effects as a motivator to apply the Alexander technique, one of them wrote: "(It) calms some of the feelings of panic when I find I suddenly cannot do something—there may be another way of dealing with it."

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