Alexander Technique

Training for the self-management of workers to prevent musculoskeletal disorders

A descriptive and comparative study of precedents where the Alexander Technique has been applied as a tool to prevent occupational risks in different organisational settings throughout the world

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1. Content

1. Introduction

This study was designed to identify the benefits that the Alexander Technique brings to organisations from the perspective of occupational risk prevention. Our objective was to carry out an in-depth and accurate study based on practical examples.

For the study, we have focused on analysing real current cases where the Alexander Technique is used as a training tool for occupational risk prevention in companies, and analysing pilot studies undertaken in companies. The latter of these has given us the most exhaustive evaluation results. We have also looked at current scientific studies that support the facts observed in the real cases studied in companies.

The Alexander Technique brings a new perspective to understanding how the physical and mental habits that a worker employs when undertaking his activity affect his functioning, and how this functioning can produce injuries in the short, medium and long term. The general objective of this new focus is that the worker is able to acquire tools to change his habitual approach to posture, movement, stress management and to his general coordination, in such a way that the worker himself can draw on the necessary knowledge to self-manage the prevention of injuries and an improvement in occupational health.

This current document is an abstract of the original overall report in Spanish, translated into English. The most commonly spoken language amongst the project's international collaborators was English and the abstract was created to facilitate their understanding of the project's conclusions. It shows the research process, as well as the key data collected in the form of a comparative analysis of the results, conclusions and future recommendations. The Spanish document (http://www.foment.com/prevencion/documentos/Estudio_tecnica_alexander.pdf) also includes an exhaustive description of all the case and pilot studies considered relevant, as well as the comparison between the information collected from all the studies we have had access to (description of the organisations, objectives, methodologies, type of workers who receive the training, types of implementation and evaluation of the results thereof), a brief description of the Alexander Technique, a section called recommended bibliography of the Alexander Technique and, lastly, the appendices (some of them in english).

2. Rationale

Musculoskeletal disorders (MSDs) are the most common occupational health problem in Europe. Almost 24% of workers in the European Union (EU-25) claim to suffer from back pain and 22% complain of muscular pains. MSDs don't only cause personal suffering… but they also represent a large cost for companies and for national economies[1]. According to Geoffrey Podger, Chief Executive of the Health and Safety Executive, in 2006, back pain affects some four in five people in Great Britain and results in 4,500,000 working days being lost a year due to sick leave. Businessmen are losing up to 335 million pounds a year[2].

In the last few years, various scientific studies relating to the effects of the Alexander Technique have been undertaken[3, 4, 5, 6, 7]. The data collected supports the fact that the Alexander Technique can be used as an intervention for musculoskeletal symptoms such as back pain, repetitive strain injuries (R.S.I.) and/or excessive muscular tension, and as an effective training technique. They also show that the Alexander Technique can serve as a method for re-education, providing protection and prevention against these types of injuries in the long term.

The protective and preventative character of the Alexander Technique at different levels (individual and company) complements primary prevention, the objective of which is to reduce risk at its source. The Alexander Technique can also act as a tool for secondary prevention, in other words, ways to control the development of acute symptoms and avoid them becoming chronic. The Alexander Technique can be used as a tool for adapting to the demands of the workplace, to changes, to work pressures etc. And for tertiary prevention which aims to reduce a chronic occupational health injury, the Alexander Technique can be used as a therapeutic tool in itself, capable of eliminating the symptoms of injuries, such as chronic or disabling lower back pain, tendonitis or carpel tunnel syndrome through repetitive movements, etc.

For the above reasons, we believe that this study can be of great interest as a new, real and useful tool for the prevention of musculoskeletal disorders and of risks to the psychophysical health of workers in organisations.

3. Objectives

General Objective

The ultimate goal of this study is to identify the different practical applications of the examples of Alexander Technique in organisations throughout the world, as a tool to prevent occupational risks, in particular musculoskeletal disorders, in different working environments.

Specific Objectives

The specific objectives of the study are:

- To describe the practical application of the Alexander Technique as a training method to prevent occupational risks, as well as to improve the quality of life and productivity of workers;
- To describe the Alexander Technique methodologies used in each case;
- To compare how the Alexander Technique has been implemented in different companies;
- To describe the results of the evaluations of the companies and the workers;
- To collect scientific evidence about the effectiveness of the Alexander Technique in its application as a preventative method against musculoskeletal risks.

4. Methodology

The general methodology for the project has been an investigation divided into five phases that were carried out between February and November 2011.

During each of these, a specific methodology has been followed:

PHASE 1 This comprised a general and exhaustive search for precedents where the Alexander Technique has been applied as a tool to prevent occupational risks. The search was carried out both nationally and internationally and covered all possible working environments. The research tools used during this phase were a letter sent by e-mail to all the Alexander Technique teachers affiliated to the existing associations around the world (some 4,000) in which we explained the project and requested their collaboration in the research. We also searched for and consulted the web pages of all the associations and teachers around the world that had them (more than 800 websites consulted and analysed) from which we obtained a bibliographic database with more than 130 entries that included articles, books, videos, published company reports, scientific studies, pilot studies, case studies, medical references, magazines and web pages specialised in the topic. An exhaustive review of the bibliography was undertaken, using a template, which summarised those aspects of interest, with special attention given to studying the related scientific articles. Following this, we personally contacted by e-mail approximately 130 teachers who had stated that they had applied the Alexander Technique as specialists in organisations.

PHASE 2 During the second phase, the precedents identified were checked and verified, and those that met one or more of the following criteria were selected:

- Recent or current cases (from the year 2000 onwards);
- More than 50 workers had been trained in the Alexander Technique;
- A documented evaluation of the implementation of the Alexander Technique training activity in the organisation;
- A significant level of quality in the methodology of the training activity (those involving only an introduction or similar were to be discarded);
- The reference of the Alexander Technique teacher who implemented the training activity.

The degree of collaboration and the information provided by the teacher responsible for the implementation and for the company were also valued positively.

Following this, the parameters for the study were set, defining the information we wanted to collect about the precedents:

- Information about the organisation
- Implementation of the Alexander Technique programme
- Results

Based on these indicators, one questionnaire was developed for the Alexander Technique teachers and one for the companies or organisations. Of the nearly 40 cases that passed phase 2 of the selection, we have had first hand access to information on 23 cases of practical application of the Alexander Technique in organisations:

Victorinox Swiss Knife company • **Unicible** IT company • **Siemens AG** Electrical engineering company • **Treuhand GmbH** Accountancy practices • **Ville de Lausanne** Town services • **D.E.V.K.** Insurance company • **Steuerberaterverband Schleswig- Holstein** Tax consultancy • **Alliance Insurance Corporation** Insurance company • **Chevron-Texaco** Energy company • **Cincinnati Children's Hospital Medical Center** Hospital • **Israel Air Force** Army • **BBC Bristol** Communications company • **Commonwealth Commonwealth Department of Parliamentary Reporting Staff** Australian Government Department • **Holsteiner Catering** Restaurants • **Kampovsky** Windows factory • **Zurich Financial Services** Insurance company • **Palau de la Música Valencia** Orchestra • **Kommunal** Trade Union • **NHS UK (National health services)** National Health Service • **UMassFive College Federal Credit Union** Independent non-profit making Financial Cooperative • **Fundació Collserola** School • **CEIP Fontanelles** School • **De Hartekamp Groep** Foundation for handicapped people.

PHASE 3 During the third phase, those examples we viewed as especially interesting were analysed in depth and described. To be selected in this phase, the cases had to fulfil one or more of the following criteria:

- An evaluation of the implementation by the organisation;
- Preferably current cases or, if not possible, recent (from the year 2000 onwards);
- Continuity: seen by the organisation as a necessary initiative within the company policy framework for a minimum of 3 years;
- A significant level of quality in the methodology of the training activity (not those involving only an introduction or similar);

- First hand collaboration and contribution of information from both the company and the teacher undertaking the implementation;

- Examples involving different sizes and types of organisations.

This analysis was carried out by collecting information via an on-line questionnaire and interviews – by telephone, skype or in person during the 2011 International Alexander Technique Congress (Lugano, Switzerland) with the Alexander Technique trainers and the people responsible for the implementation of the Alexander Technique in the organisations – following the questionnaire as a script, as well as articles and the internal reports of the companies and teachers. This data was collected in the original language in which the communication was established and has served as a base for the study.

The cases that passed into this phase comprise 7 relevant cases and 3 pilot studies:

Victorinox • Unicible • Siemens AG • Treuhand GmbH • Ville de Lausanne • D.E.V.K. • Steuerberaterverband Schleswig- Holstein • Alliance Insurance Corporation • Chevron-Texaco • Cincinnati Children's Hospital Medical Center.

Some of the cases not included in this phase we also believe are of great interest thanks to many of their characteristics, the Israeli Air Force, the BBC, the Australian Government Department, and the hospitality company Holsteiner Catering, amongst others. These cases were not analysed as relevant cases because they did not meet two conditions; providing first hand information from the organisation and being of current implementation.

PHASE 4 In the fourth phase, comparison criteria were established following the indicators defined in phase 2. Following this, a comparative analysis was done, and an interpretation of the results obtained, as well as some conclusions from the relevant cases and the pilot studies/tests in the organisations. The same process was followed with all the cases for which we have significant information. Finally, a section on future recommendations was created.

PHASE 5 A presentation on the process for the study was made via a communication at the International Congress of Alexander Technique Teachers, August 2011, Lugano, Switzerland. Finally, the overall project report was written, a summary of the report translated into English and the on-line publication of both of these.

5. Evaluation results from all the practical cases

The data set out in this section is a sample of the results of the overall report. The data includes conclusions that have been arrived at through the comparative analysis of all the cases studied:

The information regarding practical applications show that training in the Alexander Technique is widespread in all types of companies (economic sectors, sizes and types of activities).

Given the variety of companies where the Alexander Technique is being applied, it is clear that the employees that have learnt the Alexander Technique carry out very different working roles with different ergonomic and psychosocial risk factors (see on for examples). They are mainly office jobs with high levels of time pressure, workload and using computer screens during most of the working day, followed by positions on assembly production lines where, as well as repetitive movements and high levels of time pressure, tasks requiring a high level of attention to detail must be carried out; finally, workers with a high degree of physical work (gardeners, woodcutters, refuse collectors and street cleaners), and hyper-specialised jobs such as surgeons, musicians or pilots which require high levels of attention, concentration and pressure.

According to most teachers, workers are increasingly aware of the need for a tool to improve their quality of life and work, in particular, for administrative and sedentary jobs and those requiring repetitive movements.

Companies mainly ask for the Alexander Technique to deal with musculoskeletal risks, however they have also cited other needs of a psychosocial character (stress management, team work, job satisfaction, the working atmosphere, communication, creativity…) and a business nature (reduction of absenteeism due to sickness, retaining talent, reducing errors, increasing productivity…).

The conclusions of the scientific studies, and the examples in organisations that have been studied, show evidence relating to the efficiency of the Alexander Technique in dealing with musculoskeletal disorders; in terms of the reduction in days of pain[3], reduction in the activities and functions limited due to pain[3], improvement in muscular toning activity, postural coordination, balance and the significant reduction in the base levels of muscular use, both in habitual movements and in other more specific movements[4, 5, 6, 7].

In relation to the psychosocial risks, scientific evidence at a psychological level has been found; improvements in self-esteem in those with symptoms of depression[6] and, in the examples studied where the Alexander Technique delivered improvements in social skills such as public speaking (Unicible) and helped achieve an appropriate working atmosphere, or we could even say a 'healthy' one (Victorinox).

Evaluation Processes

The organisations involved in this learning process have indicated the effectiveness of the Alexander Technique through the data on satisfaction levels received from the workers and the managers, the people responsible for Human Resources, those responsible for H&S, and the Department Heads, among others.

The methods by which the companies evaluate results include meetings between company representatives and the trainers, the collection of information from the workers via satisfaction surveys or informally, and in some cases information has been collected by following indexes related to certain medical complaints and/or absenteeism. Some companies have used more than one of these methods simultaneously.

The large majority of the results evaluated quantitatively are at a physical level and some at a business level. Quantitative evaluations were not carried out at a psychosocial level. The qualitatively evaluated results are at a physical, psychosocial and business level.

Evaluation Results

The responses evaluating the training on behalf of the workers are, to a very large degree, positive. They believe that what they have learnt is useful and that they can put it into practice during their activity in the workplace and in their daily life.

The responses evaluating the training on behalf of the companies are:

- Those business needs that show positive results are the reduction in working hours lost annually through illness (mentioned by 45% of the companies), in the relationship between costs and profits (15%) and in others such as the reduction in the funds for employment insurance, the reduction in accidents in the workplace, the reduction in the incidence of fatigue related to errors, and optimising the performance of their employees (10% respectively).

- Those physical needs that show positive responses are in the improvement of musculoskeletal disorders (mentioned by 50% of the companies), the reduction of pains (20%), the reduction in muscular tension (20%), the improvement in body posture and resistance in the torso and back (5% respectively).

- Those psychological needs that show positive results are in the improvement of stress management (50%), improvement in the capability to speak in public, the control of disproportionate reactions, improvement in the environment, team working, creativity and concentration (10% respectively).

The responses evaluating the training on behalf of the teachers are, to a very large degree, positive. They assert that the initial objectives have been fulfilled and the implementation of the Alexander Technique

has allowed the pupils to improve the management of their health and approach to prevention at an individual level and at an overall company level as a result of the involvement of the latter.

The quantitative evaluation of the capabilities of the teachers qualified in the Alexander Technique for which we have data, is that the large part are rated as very capable and effective.

A common factor in the majority of cases where, in spite of good results, the implementation does not remain ongoing, is that the person responsible for the implementation of the Alexander Technique within the company changed roles or companies. As a result, the link between the company and the Alexander Technique training is lost.

The organisations involved in the process of implementing the Alexander Technique as a Health & Safety training tool for workers, have reported that the Alexander Technique is efficient – from both the workers' and the managers' points of view - in obtaining effective changes in the behaviour and attitude of the employees towards their own health and, by extension, towards the health and safety policies.

Relevant Data

The Alexander Technique has been used as an internal tool to manage the prevention of Health and Safety risks within organisations in 74% of the cases studied.

The use of the Alexander Technique as a preventative measure in the majority of organisations analysed (17 of 23) contrasts with the low number (3) that implement it to meet a specific H&S country regulation. In various cases, we have been told that the training goes over and above the specific regulatory demands of the region in terms of preventing H&S risks.

All the relevant cases of the use of the Alexander Technique collected in this study are located in Switzerland and Germany.

The Anglo-Saxon region is where most resources are being dedicated to investigate the effectiveness of the training: 3 relevant pilot cases and 3 scientific articles are from the USA and 2 relevant scientific articles are from the UK. All the scientific studies considered relevant in this project were produced between 2004 and 2010[3, 4, 5, 6, 7].

The examples of the use of the Alexander Technique in organisations found in Spain are, in the main (66%), not very significant; small scale and short term. This confirms our hypothesis that the Alexander Technique is little known in Spain.

Success factors

In carrying out this study, we have realised that in spite of the fact that the profiles of the workers studied are all very varied, with some marked differences, the result has been positive in all cases. We believe this is due to the fact that the Alexander Technique is always based on

the individual and his needs, and adapts to every situation however varied it may be.

All the successful cases use the base methodology of the Alexander Technique that consists of individual, verbal instruction and being guided by the hands of the qualified teacher. Some of them are complemented by other types of training based on the Alexander Technique such as group classes etc. The cases where a group methodology was used exclusively have been of an introductory or similar nature. In these cases, the majority of the teachers responsible for the implementation express the need for individual sessions to address the initial needs. In most of the relevant cases, 'refresher' sessions are offered after the training course in order to maintain the learning 'fresh in the mind and the body' over time.

The Alexander Technique teachers, especially those with experience in workplaces, are competent in assessing and influencing the interaction between the workers and the workplace tools (the ergonomics related to the design and location of the workplace tools in relation to how the body and mind are used).

The teachers comment that although over time the attitude of the workers is in the majority of cases very positive, at the beginning they usually come up against certain resistance.

The skill, training and competence of the teacher is a necessary prerequisite for the successful implementation of a training course, as well as the openness of the student to learn and change habits.

The involvement of the organisation in the implementation process (communication, needs analysis, design, management support…), and the communication between the person responsible within the company and the Alexander Technique trainer to update the design and adapt the training to the needs of the company over the years, is of great value in obtaining substantially positive overall results.

Some of the overall conclusions of the companies

Victorinox 'The company considers the Alexander Technique to be a main prevention tool in the area of workplace health, as well as for preventing musculoskeletal disorders'. Paul auf der Maur, head of a department where the workers have a large component of manual work says, 'At the beginning of the implementation, the workers had a lot of problems with tendinitis, as well as excessive muscular tension. I thought about how to solve the problem and the Alexander Technique seemed like the appropriate solution, given that it involves a process of learning, and encourages the autonomy of the people in taking charge of their own health. Our experience is that if the employees LEARN, it works'.

Lausanne Town Council 'The improvement in psychophysical coordination is adequate to meet the objectives: health in the workplace and professional longevity'.

D.E.V.K. 'Initially, the training was given in a group format then, on not giving the expected result, individual training was instigated which gave a very satisfactory result'.

Treuhand GmbH 'It seems to be a good preventative measure against illness. It continues to be very well accepted, in spite of the fact that the workers have to pay half of the costs'.

Siemens AG 'Its expansion to all the areas of production is highly recommended. There are good indications that this positive change will be maintained'.

Unicible 'The organisation would recommend this training to all employers who would like their employees to enhance their individual performance in handling situations through increased behavioural flexibility, to increase their assertiveness, to allow better dialogue and public speaking, to reduce muscular and emotional tension and achieve more ergonomic conditions at work'.

Steuerberaterverband Schleswig-Holstein e.V. 'The company believes that the success of the Alexander Technique depends to a large degree on the focus of the trainer. If the company is fortunate enough to find a trainer with a business mentality who is focused on solving their specific difficulties, as we did, I recommend the method without hesitation'.

6. Conclusions and future recommendations

Conclusion

This section sets out some of the relevant conclusions and future recommendations of the overall report:
The Alexander Technique is a preventative measure applicable in any type of company (of any sector or size) where ergonomic or psychosocial risks have been detected.

The reviewed bibliography, the described pilot and case studies of examples of implementation in companies, demonstrate qualitative and quantitative evidence of the effectiveness of this training against musculoskeletal and/or psychosocial-type risks, whether as a tertiary, secondary or primary prevention tool.

From the point of view of the Spanish regulatory framework, this type of training could be included in the planning for health and safety management of any company where musculoskeletal and/or psychosocial-type risks have been detected.

The cases studied corroborate the fact that the Alexander Technique is a simple and practical method that improves the coordination, freedom of movement, flexibility, support and balance through changing habits. Practicing the Alexander Technique increases the worker's perception and autonomy, bringing a control that is fluid and alive instead of rigid. It provides the means whereby the use of one part of the body improves, through looking after the overall use of the body.

The implementation and application of the Alexander Technique does not imply a dependence on the technique but a process of unlearning in order to learn from a new perspective that delivers physical and mental flexibility when adapting to daily challenges, as well as new ones.

Future recommendations

Listed below are the recommendations of most significance:

- Consider the Alexander Technique as an effective preventative measure against risks of a musculoskeletal and/or psychosocial nature, whether applied as tertiary, secondary or primary prevention:

  - Use the protective and preventative nature of the Alexander Technique at an individual and company level as a primary prevention tool, given that this technique, used on an ongoing basis, becomes a protective tool in itself; it reduces the probability that workers suffer musculoskeletal injuries[5, 7], as

well as increases the capacity to overcome potentially stressful situations. The training course builds competence in the constructive control of one's own psychophysical use.

- Use this technique as a secondary prevention tool, given that it provides components that control the advance of symptoms, avoiding them becoming chronic, offering tools for adapting oneself to the demands of the workplace environment, and tools for self-managing the improvement of ergonomic, musculoskeletal and psychosocial problems. The scientific studies[3, 4] and implementation studies (Alliance) analysed show that the effects of learning the Alexander Technique are maintained over time.

- Training in the Alexander Technique as a tertiary prevention tool, given that it provides tools for reducing chronic work-related injuries. According to the data collected in the review of relevant scientific articles, the Alexander Technique is used as a therapeutic tool in itself, capable of reducing the symptoms of injuries, such as chronic or disabling lower back pain, back pain, tendinitis of carpel tunnel syndrome caused by repetitive movements, RSI, etc[3, 4, 5, 7]

- Use the Alexander Technique as an ergonomic tool to assess the worker and company regarding external aspects (such as the appropriateness of the elements of the workplace and others) and train employees in internal aspects (such as physical habits, muscular tension, patterns of movement, perception, mental attitude and others).

- Remind those responsible for H&S that the adaptability and flexibility of the Alexander Technique offers a wide range of implementation options – as we have seen in the cases studied – and can be adjusted to the needs and characteristics of the organisation. The individual training sessions can be accompanied by group sessions.

- Based on the cases observed in this investigation, in most companies there is little custom of quantitatively evaluating the results of the Alexander Technique training courses. Encourage more needs analyses of the workers and the company before designing the implementation. Evaluate the results – with the same indicators – of pre and post-implementation when the training course has ended, and again after three months, one year or more after the training has been completed. Evaluate quantitatively the incidence of the Alexander Technique in:

- The business results such as absenteeism, low productivity etc;

- The results in physical terms of the workers' health such as the evolution in the number of workers with musculoskeletal disorders – occasional, recurrent and chronic – reduction in pain, etc;

- The results in terms of psychosocial aspects such as the reduction in stress, reduction in mental fatigue, improvement in attention, capacity to adapt to changes, improvement in the working atmosphere, etc;

- Evaluate the effect of the 'refresher' sessions or other methodologies based on the Alexander Technique for the practice and maintenance of the initial training over time.

- To obtain an overall evaluation of the Alexander Technique, the use of evaluation tools that can give results comparable with implementations or pilot studies carried out in other organisations, as well as with scientific studies throughout the world, is recommended.

- Increase the awareness of the Alexander Technique in the workplace, promoting its spread through the use of an informative book on the application of the Alexander Technique in the work environment.

- Gain a deeper knowledge of the success factors underpinning the implementation of the Alexander Technique in companies. The teachers that provide the training should be teachers qualified in the Alexander Technique.

- Offering this type of training to workers can help to create a better link between worker and company, influencing the reduction in psychosocial risks: the workers feel more looked after and valued which increases the degree of commitment; it leads to a better attitude and, as a result, the level of involvement, performance and eventually the level of productivity increases.

Good Luck!

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