



Activator as a therapeutic instrument: Survey of usage and opinions amongst members of the British Chiropractic Association

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Summary This paper provides an account of a survey of chiropractors registered with the British Chiropractic Association that was designed to examine use of the activator as a therapeutic instrument, and opinions related to its use. The survey was mailed to a sample population of 300 chiropractors and achieved a response rate of 82%. Of the chiropractors who responded to the survey and were included in data analysis, 82% reported that they used an activator adjusting instrument, but only 2% of these stated that they typically used it as their primary method of treatment. The survey suggested that Activator I was the most frequently used form of the instrument. Cervical pain was the most frequently identified condition for which the activator was used. The vast majority of responders believed that the activator was a useful therapeutic instrument in chiropractic practice (81%), and that it offered a safe treatment option (84%). Viewed in the context of other surveys of activator usage, this work adds to a body of literature which suggests an increase in activator usage amongst chiropractors practising in the United Kingdom since the early 1990s. This being the case, it is appropriate that issues of effectiveness and safety in relation to activator therapy are given due consideration in future research.

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Introduction

The term 'chiropractic' might bring to mind an image of manual therapy, i.e. treatment by hand, but various instruments have been used in chiro-

practic clinical practice, including the activator adjusting instrument (AAI). Associated with the AAI is Activator Methods Chiropractic Technique (AMCT).

The AAI has been described as a hand-held device that delivers a controlled and reproducible force.¹ Its use is fundamental to the practice of AMCT, but it has also been used by chiropractors as an alternative to manipulation by hand (adjustment), where

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manual therapy has been considered ill-advised, for example in the treatment of osteoarthritic or osteoporotic patients.^{2,3} This is not to say, however, that use of mechanical adjusting devices, such as the activator, is necessarily without risk of adverse side-effects.⁴

Warren Lee and Arlan Fuhr produced their first functional AAI in the 1960s from a surgical mallet designed to split impacted wisdom teeth, but it was not until the 1970s, after development of the device, that the first commercially viable version of the instrument became available.^{1,5,6} Since then, the activator has come to exist in a number of forms. The most recent additions to the AAI series are the Air Activator, intended to help to reduce stress on the user's hand, and the Activator IV.⁷ The basic concept has also been copied by other manufacturers, so that a number of 'activator clones' are now obtainable.

Surveys of chiropractors have been conducted by the National Board of Chiropractic Examiners (NBCE) in the United States, Canada, Australia and New Zealand. These studies have shown that the activator has been widely used and that within the context of the United States, usage by chiropractors has increased over recent years. In 1991, 51.2% of chiropractors who responded to an NBCE survey of chiropractors in the United States reported that they utilized activator methods.⁸ By 1998, it was 62.8%.⁹ In 2003, 69.9% of chiropractors responding to the NBCE survey in the United States reported that they utilized activator methods.¹⁰ Data published for Canada in 1993 by the NBCE suggested that 43.6% of chiropractors used activator technique.¹¹ Data published by the NBCE in 1994 suggested that 72.7 and 54.3% of chiropractors in Australia and New Zealand, respectively, used activator technique.¹²

When Pedersen carried out his survey of chiropractors registered with the European Chiropractors' Union in 1991, most practitioners who responded to the survey reported that they did not use instrumentation or machinery as part of their therapeutic repertoire.¹³ More recent figures, which have, to this point, remained unpublished in peer-reviewed literature, support the position that activator usage has been increasing on the European side of the Atlantic since the early 1990s, certainly within the context of the United Kingdom. Seventy-one per cent of chiropractors who responded to a survey of British Chiropractic Association (BCA) members, undertaken by Richards in 1997, reported that they used activator technique.¹⁴ In response to a survey of chiropractors in the UK by Wilson in 2000, 60% of the responding chiropractors, and 82% of BCA members (the largest sub-group), reported that they used activator.¹⁵ Little has been known of

the opinions or perceptions of chiropractors practising in the British Isles relating to the activator, or how these might have changed over the years.

This study was designed to determine: (1) how widely the activator was used by BCA members practising in the United Kingdom in 2003; (2) purposes for which the activator was used and (3) perceptions/opinions of BCA members relating to the activator.

Methods

A questionnaire was developed to gather information in accordance with the aims of the study. The instrument was required to be appropriate for gathering relevant data and was designed with the intention of encouraging a high response rate (the intention was to achieve a response rate of at least 50%). A variety of strategies were used to this end. A balance was struck between incorporating relevant questions and an attempt to keep the questionnaire short, interesting, and easy to follow.

A draft version of the survey instrument underwent a process of peer review to test face validity by three members of faculty at the Anglo-European College of Chiropractic. Essentially, the peer review was performed in order to identify whether, in the opinion of those with experience/expertise, the instrument was likely to be an appropriate measure for the purposes of the study. The process of peer review resulted in a number of changes being made to the questionnaire, the most significant of which was the introduction of Likert scale statements into the instrument.

The questionnaire was then piloted. Five chiropractors were asked to complete it as if it had been sent to them in the post, and also to make comments they thought relevant. The pilot was undertaken in order to identify whether questions were likely to be adequately completed and whether the instrument was internally consistent; that is, whether responses to similar questions within the instrument were consistent with one another when the instrument was completed. No changes were made to the instrument as a result of the pilot study.

The final questionnaire contained a total of 13 closed questions and participants were also given the opportunity to make comments they deemed appropriate at the end of the questionnaire. The questionnaire was produced on a single sheet of A4 paper and was divided into three sections, each corresponding to a core area of interest. The first section contained seven questions, designed to determine the extent of activator usage. The second section consisted of three questions, designed

to gather information about the purposes for which the activator was being used. The final section contained three questions examining perceptions/opinions relating to the activator and a space for comments.

A covering letter was included with each questionnaire sent out to BCA members, which itself went through the process of peer review and pilot. It explained the purposes of the study and assured potential responders that appropriate confidentiality would be ensured. In order to make sure that information remained anonymous, each questionnaire was number coded so that data were not easily attributable to any individual. Each number corresponded to a name and address to which a survey instrument had been posted to allow follow-up of non-responders, but returned questionnaires and names/addresses were kept separately.

A sample of 300 chiropractors was selected from data available on the BCA website.¹⁶ The first name from each county was selected alphabetically, then the second name, and so on until a sample of 300 chiropractors was produced.

The questionnaire with its covering letter was posted to chiropractors during September 2003, along with a stamped-addressed envelope for return to the Anglo-European College of Chiropractic. After four weeks, a second questionnaire package was posted to those who had not responded to the initial mailing. This included a copy of the questionnaire, a stamped-addressed envelope, and a cover letter politely reminding them of the study and that they did not have to use the activator to participate. A deadline for receiving completed questionnaires was set for a further four weeks, so that the period of data collection was completed by the end of November 2003.

Data were entered into Microsoft Excel '97 and descriptive statistics were used to summarise the information obtained.

Results

Of the 300 questionnaires mailed to BCA members, 212 were returned following the initial mailing, and a further 34 responses were received after the follow-up mailing. This gave an overall response rate of 82%.

Thirteen of the questionnaires returned were omitted from data analysis. The most common reason for exclusion was failure to complete the reverse side of the questionnaire ($n = 5$). Other reasons for exclusion were: respondents having moved address ($n = 3$); questionnaires returned after the final deadline for

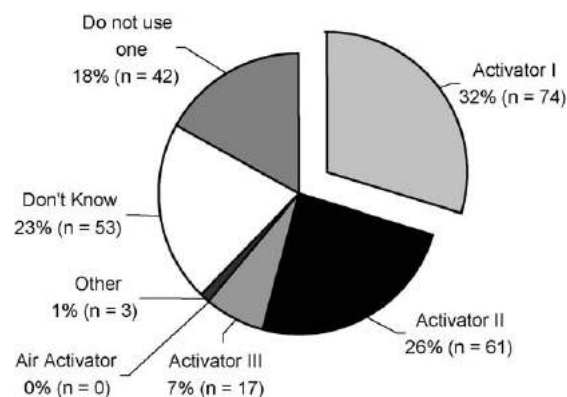


Figure 1 Types of activator that respondents stated they used. The percentages given are in relation to the total number of respondents to the survey. Respondents were asked to indicate one or more instrument that they used. The category 'other' included the following three instruments: "Meyer Instrument", "Integrator", and "Double-headed Activator".

data collection ($n = 3$) and questionnaires not completed at all ($n = 2$). A total of 233 questionnaires, 78% of the surveyed population, were therefore included in final analysis.

Eighty-two per cent of respondents stated they used an activator; however, only 2% of these stated that they typically used it as their primary method of treatment. The most commonly used form of the instrument was Activator I, which the survey identified as being used by 32% of respondents (Fig. 1). Nearly half (47%) of those responders who used an activator reported that they typically used it on a daily basis (Fig. 2). Most used it on a minority of their patients (Fig. 3).

Of the respondents, 69% were male, and 31% female. Eighty-eight per cent of the females reported that they used an activator, compared to

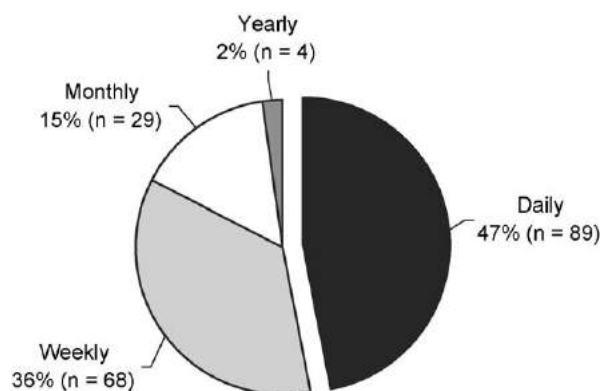


Figure 2 Estimated frequency of activator use by those respondents who reported that they used an activator. In response to question 5a, one person responded that his activator was broken at the time of the survey.

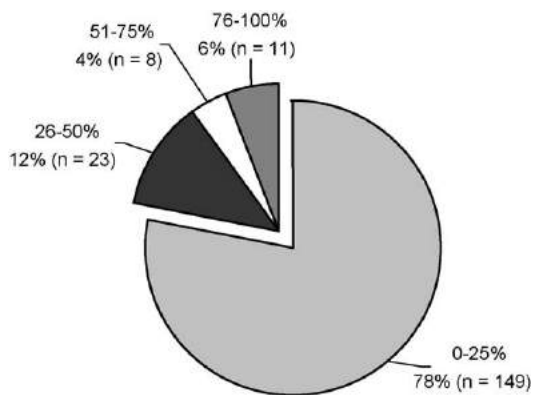


Figure 3 Estimated percentage of patients on whom an activator was typically used, as reported by those who stated that they used an activator.

79% of the males, suggesting higher usage of the instrument amongst females.

Only 18% of survey respondents who used an activator reported having completed a course in AMCT, and only 12% stated that they used AMCT. Use of the activator amongst BCA members cannot therefore be said to be strongly associated with training in, or use of, AMCT. It is not clear from this survey how the majority of BCA chiropractors who used the instrument came to be familiar with it.

Cervical pain was the most common condition for which respondents stated that they had used an activator (Fig. 4). Eighty-two per cent of respondents who had made use of the activator claimed that they had used it to treat cervical pain. The survey suggested that activators were used more commonly in the management of elderly patients than in patients of other age groups. Activators were frequently used in combination

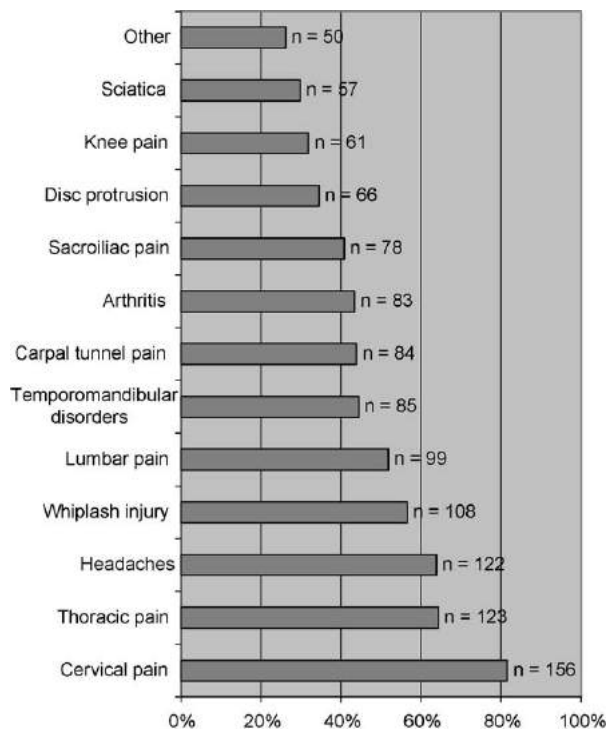


Figure 4 Conditions for which respondents stated that they had used an activator.

with other treatment techniques (60% of responders who used the instrument). Diversified technique was the most commonly identified chiropractic technique with which activator treatment was combined.

Concerning opinions/perceptions relating to the activator and its use (Table 1), 81% of all respondents agreed with the statement that activator is a useful form of treatment in chiropractic clinical practice; 84% agreed with the statement that activator provides a safe form of chiropractic treat-

Table 1 Opinions/perceptions relating to the activator and its use

	Strongly agree (%)	Agree (%)	Maybe (%)	Disagree (%)	Strongly disagree (%)	Don't know (%)
The activator is a useful form of treatment in chiropractic practice	33 (n = 76)	48 (n = 111)	15 (n = 36)	2 (n = 4)	2 (n = 5)	<1 (n = 1)
The activator provides a safe form of chiropractic treatment	36 (n = 83)	48 (n = 112)	12 (n = 28)	2 (n = 5)	1 (n = 3)	1 (n = 2)
Activator method chiropractic technique (AMCT) should be taught in chiropractic colleges	15 (n = 36)	35 (n = 82)	30 (n = 70)	6 (n = 14)	5 (n = 12)	8 (n = 19)

This table shows strength of opinion for/against Likert scale statements.

ment; and 51% agreed with the statement that activator methods chiropractic technique should be taught in chiropractic colleges.

Discussion

Surveys of this type are subject to potential errors relating to their design. In this survey, a sample of 300 chiropractors was selected from a population of approximately 1000 members of the BCA. Of the 300 selected, the results presented were based on 233 appropriately completed survey instruments. This number represents less than a quarter of the population of the BCA as it was in September 2003. It is not known how those BCA members who were not surveyed would have responded if they had been asked to take part in the study, nor how non-responders who were sent the instrument might have responded if they had completed the questionnaire.

This survey did not examine patient records, but instead relied on the memory of chiropractors taking part. Estimations based on recollection, for example in relation to the conditions for which an activator has been used, are a second important source of potential error.

Although the instrument went through a process of peer review and pilot, it is conceivable that the final questionnaire was not completely valid and reliable. This is because the peer review was a subjective process and because the pilot undertaken was simple and small scale. More rigorous examination of the instrument before it was used might have resulted in further changes being made to it.

On reflection, this particular survey might also have been improved by: (1) rewording the Likert scale statements (Table 1) which are deemed to be overly positive in their sentiment; (2) applying a process of random number generation to the selection of subjects for inclusion in the survey. Nonetheless, the sample was randomly selected and the response rate was high.

Despite sources of potential error, its authors are of the opinion that this survey offers a valuable addition to published material relating to activator usage. The survey adds weight to other recent Anglo-American studies which allude to a rise in the number of chiropractors making use of activator in their treatment of patients as compared to the early 1990s.

Given an apparent rise in activator usage by chiropractors in recent years, the efficacy/effectiveness of activator treatments in comparison with other chiropractic approaches is an important consideration for the profession. A number of clinical research studies have been published in this area

and reviews of available literature also exist^{17–19}. A recent review by Taylor et al.¹⁷ concluded that the activator was as effective as manual procedures in producing clinical benefit; however, universal agreement by the committee involved in this review was elusive. Further rigorous research would be beneficial.

This study highlighted an apparent association between use of an activator and patients with cervical pain, and between use of an activator and elderly patients. Both chiropractic treatment of patients with cervical pain and chiropractic treatment of the elderly have been associated with risk of therapeutic side-effects.^{3,20} Given that most of the respondents to this survey considered activator a safe treatment option, one might ask whether it was used by these chiropractors because it was considered a safe option? This in turn begs the question, how safe is the activator? Taylor et al.¹⁸ concluded that the activator instrument was safe and had no more risk than did manual high velocity, low amplitude procedures. However, as in the case of potential clinical benefit, the committee failed to reach universal agreement in relation to safety. A minority report was written arguing that sufficient evidence was lacking to make a judgement. Again, further research is to be encouraged in order to more clearly identify and quantify potential risk associated with activator therapy.

Conclusion

On the basis of this survey, it can be induced that in 2003 the majority of British Chiropractic Association members included activator therapy in the management of their patients, although few used it as their primary therapeutic method. Most considered it a useful and safe treatment option. It is appropriate that further research into the safety and effectiveness of activator therapy is encouraged.

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