



Complementary therapy use by persons with multiple sclerosis: Benefits and research priorities

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Summary People with multiple sclerosis (MS) are commonly actively involved in self-care, with many accessing complementary and alternative medicine (CAM) to help in symptom management. To provide increased insight into benefits from CAM use and service user ideas over research priorities, a two-part study, involving a questionnaire and interactive workshop, was undertaken with attendees at a national Congress of the MS Trust in the UK. The six most used therapies were reflexology, massage, yoga, relaxation and meditation, acupuncture and aromatherapy. Each was rated by a quarter to two-fifths as ‘extremely helpful’. Insight into the nature of the therapeutic benefit was provided in user comments. Despite the self-selected nature of the sample, the findings point to potential benefits of a set of CAM therapies in helping people with MS. More research on potential benefits of therapies was called for by participants and on the dynamics of the therapeutic effect.

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Introduction

Multiple sclerosis (MS) is a disease of the central nervous system (CNS) and, once present, has no cure. Symptoms can affect all aspects of a person’s life. These may include fatigue, bladder dysfunction, bowel problems, general weakness, spasms, sensory loss, pain and musculo-skeletal problems. As the condition requires ongoing and life-long management, people with MS are commonly actively involved in self-care. Treatment and care options include drug therapy (for example, beta-

interferon) and complementary or alternative medicine (CAM).

Previous studies suggest wide variability in the use of CAM by people with MS, varying in part at least by time period for the prevalence rate and definition of CAM (cfErnst¹ on the problematic features of CAM prevalence surveys). In the USA, a census postal survey of those on the mailing list of the MS Foundation found that over half (57%) of their respondents (response rate of 27%) had ‘ever’ used or were ‘currently’ using at least one CAM modality.² The longer the time that people had MS, and the less satisfied they were with conventional treatment, the more likely they were to use CAM therapies. More recently, Carlson and Krahn,³ using 2000–1 date on insured adults, reported that 20% of people with MS had used CAM within the last 12

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months. In Canada, a 2-year prevalence rate of 70% was found; however, the definition of CAM included products such as vitamins and minerals, as well as therapies.⁴ In Europe, a survey undertaken at a single MS clinic in Rostock, Germany, indicated that 62% of the MS patients were 'currently' using CAM,⁵ with the vast majority (90%) using them to complement conventional medical treatment, rather than as an alternative to it. They also found that CAM users were more severely affected by the disease than non-CAM users. Their later survey⁶ involving an additional clinic in Berg/Kempfenhausen reported a 67% prevalence rate. Finally, in Italy, Pucci et al.,⁷ drawing on interviews with 109 consecutive ambulatory outpatients with at least 3-year diagnosis of definite or probable MS, reported a 3-year prevalence rate of 36% for use of at least one CAM therapy.

Use of CAM is however taking place against a context of limited evidence of safety or effectiveness of CAM therapies.^{8,9} Recent guidelines from the National Institute of Health and Clinical Excellence (NICE), due for review in November 2007, state that people with MS 'should be informed that there is some evidence to suggest that (some) might be of benefit, although there is insufficient evidence to give more firm recommendations' (National Institute of Clinical Excellence,¹⁰ p. 42). Areas included were: reflexology and massage; fish oils; magnetic field therapy; neural therapy; massage plus body work; *Tai Chi*; and multi-modal therapy. The UK MS Society reiterated the dearth of research on CAM.¹¹ It also pointed to the greater acceptance of CAM therapies as part of the range of treatment options¹² and the value of people with MS talking over their possible use of CAM with their GP.

Against this background, this paper aims to provide additional data on the use and benefits of CAM for MS in the UK, obtained from attendees at a national Congress of the MS Trust, a leading independent UK charity for people with MS, their families, friends and health professionals who work with them. The paper also outlines the ideas of a subset of participants about research priorities for CAM and MS.

Materials and methods

A questionnaire survey and workshop were conducted at the April 2006, Manchester, UK, MS Trust Biennial Congress for persons with MS and their carers. The questionnaire comprised questions on demographic details (age, gender, MS diagnostic

stage and years since diagnosis), use in the last 12 months of any of a set of CAM therapies, and a rating of, and comments on, their helpfulness for their MS. Ratings were obtained using a 5-point Likert-type scale, running from 'not at all helpful' to 'extremely helpful'. The listed therapies were based on Factsheet 18 of the MS Essentials series.¹¹ The questionnaire was piloted with members of the Sheffield Branch of the MS Society, leading to changes in the questionnaire layout. The questionnaire was distributed at the second day of the conference by MS Society volunteers, who approached individuals to invite them to participate. In addition, questionnaires were available from the research information desk at the conference.

An interactive workshop, entitled 'Complementary Therapies and MS' conducted on the second day of the Congress and led by the lead author (LE), was advertised in the Congress timetable. Following a short presentation of current research in CAM for MS, participants were invited to discuss, in one of three small groups and in a plenary, firstly, the therapies they had used for their MS (which ones and their experiences) and, secondly, therapies they would like to see research done on and why. Feedback at the plenary was tape recorded and subsequently transcribed.

All the numerical data were entered into SPSS for Windows to generate descriptive statistics. The non-numerical and oral data were analysed to identify the general themes emerging. Ethics approval for the study was given by the Ethics Committee of the Faculty of Medicine and Health at the University of Leeds. Participation in the survey and workshop was voluntary and all data arising from the survey and workshop have been anonymised (for a copy of the full report, see Esmonde and Long¹³).

Results

Participants and response rate

While over 1000 questionnaires were made available to the conference organisers, only 138 were completed. It is not known how many were in fact distributed. Respondents had a median age of 45–54 years (35%), 3% were under 24 years of age and 3% were over 65 years of age. Over three quarters (77%) were women. Just over half (51%) said that their MS stage was relapsing remitting, 18% primary progressive MS and 16% secondary progressive, with 15% indicating that they had an 'other' (benign or not stated) MS diagnosis. The

profile of responders is similar to national information concerning people with MS,²² leading to greater confidence in the potential representativeness of the completed questionnaires.

The workshop was attended by between 10 and 35 people. Numbers fluctuated, with participants coming from a workshop on fatigue in MS and others leaving early as they were dependent upon pre-arranged transport. All but three of the participants had a diagnosis of MS and had tried at least one complementary therapy; the other three attendees were carers or close relatives of someone who had MS.

Survey findings

Reported CAM use

Over four fifths (84%) of respondents had used CAM therapies in the last year. Six therapies were used by at least one fifth ($n = 28$ – 52) of the respondents. Reflexology had been most used (40%, $n = 52$), followed by massage (33%), yoga (31%), relaxation and meditation (25%), acupuncture (21%) and aromatherapy (21%). A profile of responders who used these therapies, by stage, diagnosis length and gender, can be seen in Table 1. More women than men had used the therapies listed, but there was no discernible pattern between therapy use and either diagnostic stage or length of

diagnosis. Nine other therapies had been used, but were mentioned by a less than 12% ($n \leq 16$) of respondents. These included homeopathy, Pilates, herbalism, osteopathy, *Tai Chi*, chiropractic, *shiatsu*, hypnotherapy and the Alexander Technique.

Helpfulness of the six most used therapies

A quarter to two-fifths of the respondents rated each of the six therapies as ‘extremely helpful’, with the vast majority of people indicating that it was at least ‘somewhat helpful’ (52–78%) (Figure 1). Only in the case of acupuncture (18%) did a substantial proportion rate the therapy as ‘not at all helpful’; the next worse was reflexology (9%).

Perceived benefits of six most used therapies

The most mentioned benefits for the six most used therapies were positive effects on enhancing relaxation, reducing specific physical symptoms and inducing general well-being (Table 2). No clear pattern was discernible for any differences by diagnostic stage, years since confirmed diagnosis, gender or age.

Across therapies, the most common benefit was relaxation. Typical comments included:

‘More relaxed, easier movement, more positive’ (reflexology user)

Table 1 Profile of respondents ratings of the six most used therapies

	Relapsing remitting	Primary progressive	Secondary progressive	Other
Reflexology	26 women and 3 men Diagnosis of 1–26 years	9 women Diagnosis of 1–21 years	8 women and 1 man Diagnosis of 9–12 years	5 women Diagnosis of 9–12 years
Massage	25 women and 4 men Diagnosis of 2–4 years	7 women and 2 men Diagnosis of 6–35 years	5 women and 1 man Diagnosis of 7–30 years	2 women Diagnosis of 12–32 years
Yoga	18 women and 5 men Diagnosis of 1–35 years	5 women Diagnosis of 1–21 years	4 women and 2 men Diagnosis of 6–25 years	7 women and 2 men Diagnosis of 5–34 years
Relaxation & meditation	15 women and 2 men Diagnosis of 1–18 years	4 women and 3 men Diagnosis of 4–21 years	5 women and 1 man Diagnosis of 6–30 years	4 women Diagnosis of 7–34 years
Acupuncture	10 women and 2 men Diagnosis of 2–33 years	5 women Diagnosis of 2–21 years	7 women and 2 men Diagnosis of 2–30 years	3 women Diagnosis of 5–34 years
Aromatherapy	16 women and 1 man Diagnosis of 4–26 years	3 women and 1 man Diagnosis of 7–21 years	3 women and 1 man Diagnosis of 6–15 years	1 woman and 1 man Diagnosis of 5–32 years

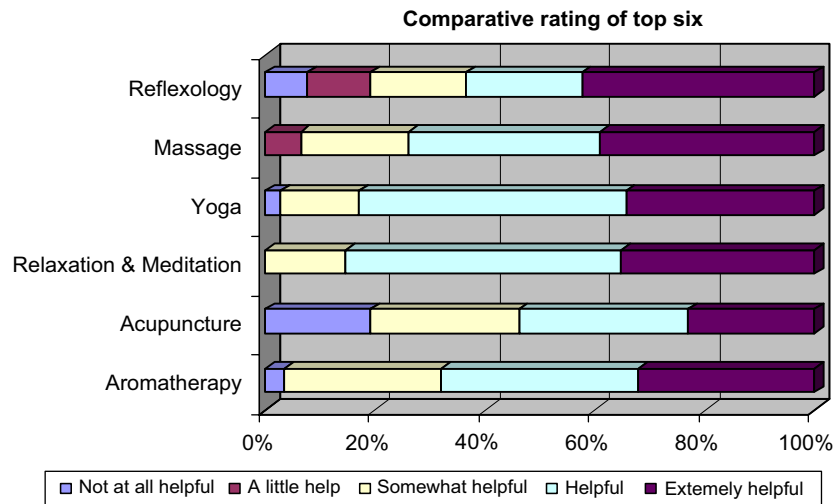


Figure 1 Helpfulness of the six most used therapies.

Table 2 Summary of benefits of the six most used therapies

Reflexology	Massage	Yoga	Relaxation and Meditation	Acupuncture	Aromatherapy
<i>Relaxing</i>	<i>Relaxing</i>	<i>Relaxing</i>	<i>Relaxing</i>	<i>Relaxing</i>	<i>Relaxing</i>
<i>Specific physical symptoms</i>	<i>Specific physical symptoms</i>	<i>Specific physical symptoms</i>	<i>Specific physical symptoms</i>	<i>Specific physical symptoms</i>	<i>Specific physical symptoms</i>
Helps sleep Reduced pain	Reduced pain Reduced spasms	Helps balance Reduced spasticity	Helps sleep Helps control of spasticity	Reduced pain Improved balance	Helps sleep Reduces pain
Helps balance	Eased muscle tension	Improved flexibility	Eases muscle tension	Improved flexibility	Relieves tension/muscle tension
Stopped spasms	Improved circulation	Improved muscle strength		Helped quicker recovery from relapses	Stimulated bladder & bowels
Bladder and bowel problems stabilised Improved walking Improved circulation	Good for lymph drainage Increased mobility of joints and limbs	Helps mobility	Stretched out muscles		
<i>General well-being</i>	<i>General well-being</i>	<i>General well-being</i>	<i>General well-being</i>	<i>General well-being</i>	<i>General well-being</i>
Helps body awareness Energising	Increased sense of well-being	Social contact	Relaxes the mind Clears the mind Helps control frustration Sense of well-being	Increased energy Felt I was 'doing something'	Self-worth improved Uplifting

'Triggered parasympathetic nervous system' (reflexology user)
 'Helped to relax muscles' (massage user)
 'Relaxing, calming' (massage user)
 'Makes me relax and calms me' (yoga user)
 'Relaxation; decrease tension, decrease stress' (relaxation and meditation user)
 'Relaxed spasticity and helped pain' (acupuncture user)
 'Soothing. Helps to relax mind and body' (aromatherapy user)

Looking at the particular benefits for each therapy, respondents commonly pointed to beneficial effects on the relief of specific physical symptoms, suggestive of possible therapy differences on which symptoms were relieved. For example, reflexology, massage, relaxation, meditation and aromatherapy were all mentioned as leading to better sleeping.

'Feet felt lighter, walking on air. Sleep better and eases constipation' (reflexology user)
 'Keeps me mobile, reduces stress, aids sleep' (yoga user)
 'Help sleep' (aromatherapy user)

Reflexology, massage, acupuncture and aromatherapy were helpful in reducing pain.

'Relief of pain and stiffness in limbs' (massage user)
 'Helped pain and spasm in back and neck' (massage user)
 'Able to walk and stand better and less pain' (yoga user)
 'Eased pain and improved flexibility' (acupuncture user)
 'Relieved back pain' (acupuncture user)

Both yoga and reflexology enabled better mobility and balance.

'Enables better mobility, flexibility' (yoga user)
 '(It) stopped muscle spasm in my legs and helped with balance' (reflexology user)

Acupuncture 'helped quicker recovery of relapse, less wobbly legged, more energy, less numb'. Reflexology also improved walking and circulation.

'Walking was so much better' (reflexology user)
 'Bring circulation and colour back to (my) feet' (reflexology user)

Looking overall, reflexology emerged as offering the most diverse range of benefits of all the therapies mentioned by the respondents.

Workshop findings

Perceived benefits of therapies

The therapies used by participants and the benefits noted in each of the three groups are summarised in Table 3. Each of the listed therapies had been used by at least one member of the attendees at the workshop.

Several distinct themes emerged from the workshop feedback. Firstly, there was overwhelmingly positive feedback on the complementary therapies that had been used. Therapies were described as being 'helpful', 'wonderful' and helping to 'increase' strength, reduce tension' and to be a source of 'empowerment' (in the words of one of the participants, 'being pro-active in your own health'). Secondly, all agreed that the one common effect of complementary therapies was that they were very relaxing and that this in itself was of benefit.

A range of specific benefits for individual therapies was also mentioned. For example, reflexology helped 'pinpoint areas of pain in the rest of the body', 'to get rid of toxins' and it resulted in 'symptom relief'. Acupuncture was mentioned to be 'good for pain'. Massage 'helped reduce tension in areas and helped sleep'. This same group commented that they 'particularly liked it combined with aromatherapy'. *Shiatsu* was mentioned by one group as being good for 'loosening up' the body as well as being 'generally relaxing'. Yoga had been tried by all attendees and was found to be good for balance, strength ('stretching and breathing'), and flexibility. Although not elaborated on, one group mentioned that not all yoga would be good for people with MS, with '*hatha yoga*' supposed to be the best for people with MS. *Tai Chi* was also mentioned by one group, but it was felt that, to be beneficial, a separate class ought to be run for MS persons; otherwise, a person with MS would feel ostracised. Diet was mentioned by two groups as affecting overall energy levels.

Factors affecting therapeutic outcome

There was acknowledgement that 'people react differently to different treatments'. Five factors were considered as affecting therapeutic outcome. The first was relaxation. One participant phrased the issue as follows: 'does being relaxed enhance the immune system and is this the reason for the perceived beneficial effect of CAM therapies in people with MS?' The second was the therapeutic alliance. 'Spending time with the therapist' was seen as being the factor that made them feel better. There was debate over whether it was the

Table 3 Benefits of therapies recorded from workshop groups

	Group 1	Group 2	Group 3
Acupressure		Combined with acupuncture	
Acupuncture	Good for pain 'Wonderful' for sciatic pain		
CBT			Not stated what for
Diet		In general and specifically juicing was energising	
Homeopathy	Good in helping with bladder problems No response to it	Detoxifies the body with poison	
Hydrotherapy		Not stated what for	Relaxing and helps keep muscles going
Hypnotherapy		Clear thinking by using NLP to change behaviour and later life	
Indian head massage		Not stated what for	Not stated what for
Magnet therapy		Not stated what for	
Massage	Relaxing by decreasing tension When combined with aromatherapy helped sleep Comment added: 'we like black pepper'		Relaxation Can affect the immune system
Multi-vitamins and minerals			Not stated what for
Oxygen therapy			Made the person sick
Reflexology	Wonderful for circulation in feet Relaxing Helped to pinpoint problem areas	Unspecific benefits, helps get rid of toxins, relaxing and lymph drainage	Relaxing
Reiki		Not stated what for	Good when first diagnosed Pain relief, relaxation, memory loss and self- healing
Relaxation			Relaxation tapes
Shiatsu	Wonderful—loosens you up and increases overall well- being Relaxing		
Tai Chi			This kind of group exercise was found to be isolating. A specialised MS group would help
Yatsu		Good for stress	
Yoga	Increases strength, balance and breathing	Improved flexibility, sleep and relaxation. Also chair and water yoga	Balance, mental health, stretching and breathing

therapeutic alliance as such (the group was introduced to this phrase as the researcher heard and followed the group discussion) or perhaps just having someone being empathic that had a positive effect. A third factor related to having control. One group questioned whether it was the ‘contact with a person. [Or] Is it because you’re taking positive control over your intervention, you’re doing something for yourself?’ The fourth factor related to a positive mind. One group mentioned that neuro-linguistic programming (NLP) ‘helps you think more clearly... to change behaviour and alter life’. The final factor involved ‘having a pill in the hand’. This would occur when taking a homeopathic remedy; the fact that a remedy was provided was also thought to have an effect on the individual’s mind-set and contribute to a feeling of doing something positive for oneself.

CAM therapies to be researched

The major focus of the discussion over research priorities was linked to the possible ‘mechanism of effect’ of CAM therapies. Four areas were raised. Firstly, a central question for research should be: ‘does by being relaxed enhance your immune system because that was the link between all of them [the therapies]?’ Secondly, all groups advocated more research to be done on the ‘placebo effect’. One group commented: ‘...things on placebo response would be very interesting because we wondered whether it was perhaps spending time with the therapist that had made us feel better or what.’ Thirdly, research on specific therapies that were popularly used by those with MS was advocated, including reiki, diet (‘especially food intolerances and juicing’), exercise, hydrotherapy, hypnotherapy and reasons, if any, for individual differences in response to therapies. At the same time, others wanted research done on the lesser known therapies, in order ‘to eliminate them.’ Another group listed specific therapies they would like to see research on. These included: colour therapy, exercise, healing, homeopathy, hydrotherapy, hypnotherapy, reflexology, reiki, subliminal dolphin therapy (replication of dolphin sounds for therapeutic use) and touch therapy. Fourthly, one group made a bold statement on the outcomes of researching, reinforced perhaps by their own experiences of CAM therapies:

‘Even if lots of research were done, it would not change our use of those therapies. We were happy with them and we didn’t need to see

double blind randomly controlled trials or whatever they are, to do with them.’

Discussion

Our twofold study, involving questionnaires and an interactive workshop, provides potentially valid, additional data and insight into the most popular CAM therapies accessed by people with MS and perceptions of their benefits. The most used therapies were reported to be reflexology, massage, relaxation and meditation, yoga, acupuncture and aromatherapy. The most common benefits experienced were relaxation, improved sleep, pain reduction, spasm reduction and muscle strength and mobility, as well as improvement in general well-being. These findings are similar to those found in earlier studies.^{2,14} For example, pain reduction, greater relaxation (addressing the symptom of stress) and fatigue were the most frequently listed symptoms and benefits experienced in the USA study of Nayak et al.²

Looking across the survey and workshop findings, the universal experience was that CAM therapies supported and enabled relaxation. The workshop provided additional insight into factors that might affect outcome. Foremost among these were aspects of the therapeutic alliance including the length of time spent with the therapist, being able to take control and developing a positive mind-set. The latter findings cohere with other research which draws attention to the importance of fostering the client–practitioner research, for example, in the area of behavioural change and in the pursuit of patient-centred care,^{15–17} and specifically within the CAM field (for example, Mitchell and Cormack¹⁸ and Long¹⁹).

Our study also provides new data on MS service users’ perspective on areas for CAM research that might be most helpful to persons with MS. As Paterson²⁰ (p.157) says, consumers are an ‘under-used resource in researching complementary medicine in the UK.’ Their involvement could be to advise on the CAM services to access. For example, Somerset et al.²¹ in their UK survey revealed that 21% of people with MS would like to have contact with a masseur or a reflexologist. Another level of involvement is to provide insight into areas of future research. Our workshop findings suggested a hunger for evidence and reliable information on the effects of therapies and which ones not to try (while recognising individual variation in experiences), that is, to draw out the potential of CAM therapies for persons with MS. Participants also

expressed the need for research on the mechanisms of therapeutic effect. Yet another level of involvement, and of critical longer-term importance, is to engage with service users not only in the choice of research topic, but also research design, its undertaking and take-up into practice. The workshop reinforced the potential of this and the interest and willingness of participants to act in this capacity.

We recognise that our observed, questionnaire-based, estimate of CAM use 'in the last 12 months' by people with MS is highly likely to be biased and an over-estimate. Those who took part in the survey were self-selected. Indeed, a major limitation of our questionnaire study is that, given the questionnaire distribution mode, not only was sample selection not random, but also the response rate cannot be computed. This does not however discount the value of respondents' insights into the nature of the benefits of the CAM they had experienced.

Conclusion

Despite the self-selected nature of the sample, these findings point to potential benefits of a set of CAM therapies in helping people with MS to manage their condition. More research on potential benefits of therapies was called for by participants and, in particular, to explore the dynamics of the therapeutic effect. In a disease with a lifelong trajectory that impacts on quality of life, many will continue to seek CAM assistance, alongside conventional medical interventions. Collaborative researching—CAM practitioners, people with MS and academic researchers—around the research priorities of people with MS would seem to offer a highly promising way forward to generate evidence that would be of most help in the self-care of MS.

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References

- Ernst E. Contrib Title: Prevalence surveys: to be taken with a pinch of salt. *Issue Series Title: Complementary Ther Clin Pract* 2006;12(4):272–5.
- Nayak S, Matheis RJ, Schoenberger NH, Shiflett SC. Contrib Title: Use of unconventional therapies by individuals with multiple sclerosis. *Issue Series Title: Clin Rehabil* 2003;17:181–91.
- Carlson MJ, Krahn G. Contrib Title: Use of complementary and alternative medicine practitioners by people with physical disabilities: estimates from a national US survey. *Issue Series Title: Disab Rehabil* 2006;28(8):505–13.
- Page SA, Verhoef MJ, Stebbins RA, Metz LM, Levy JC. Contrib Title: The use of complementary and alternative therapies by people with multiple sclerosis. *Issue Series Title: Chronic Dis Canada* 2003;4(2/3):75–9.
- Apel A, Greim B, Zettl UK. Contrib Title: How frequently do patients with multiple sclerosis use complementary and alternative medicine. *Issue Series Title: Complementary Ther Med* 2005;13:258–63.
- Apel A, Greim B, König N, Zettl UK. Contrib Title: Frequency of current utilisation of complementary and alternative medicine by patients with multiple sclerosis. *Issue Series Title: J Neurol* 2006;253:1331–6.
- Pucci E, Cartechini E, Taus C, Giuliani G. Contrib Title: Why physicians need to look more closely at the use of complementary and alternative medicine by multiple sclerosis patients. *Issue Series Title: Eur J Neurol* 2004;11:263–7.
- Huntley A, Ernst E. Contrib Title: Complementary and alternative therapies for treating multiple sclerosis symptoms: a systematic review. *Issue Series Title: Complementary Ther Med* 2000;8:97–105.
- Bowling AC, Steward TM. Contrib Title: Current complementary and alternative therapies for multiple sclerosis. *Issue Series Title: Curr Treat Options Neurol* 2003;5:55–68.
- National Institute of Clinical Excellence. *Contrib Title: Multiple sclerosis. Understanding NICE guidance—information for people with multiple sclerosis, their families and carers, and the public (Clinical Guideline 8)*. London: National Institute for Clinical Excellence; 2003.
- Bowling A, Neild C. Complementary and alternative medicine. MS essentials. The MS Society Factsheet, 18, 2006.
- Thomas KJ, Coleman P, Nicholl JP. Contrib Title: Trends in access to complementary and alternative medicines via primary care in England: 1995–2001. Results from a follow-up national survey. *Issue Series Title: Family Pract* 2003;20:575–7.
- Esmonde L, Long AF. Report on complementary and alternative medicine use among people with MS. Leeds: University of Leeds, School of Healthcare; 2007. Available from <http://www.mssociety.org.uk/downloads/CAM_Report_Leeds.d4ca6b9e.pdf>.
- Berkman CS, Pignotti MG, Cavallo PF, Holland NJ. Contrib Title: Use of alternative treatments by people with multiple sclerosis. *Issue Series Title: Neurorehabil Neural Repair* 1999;13(4):243–54.
- Rollnick S, Mason P, Butler C. *Contrib Title: Health behaviour change. A guide for practitioners*. London: Churchill Livingstone; 2002.
- Ford S, Schofield T, Hope T. Contrib Title: What are the ingredients for a successful evidence-based patient choice consultation? A qualitative study. *Issue Series Title: Soc Sci Med* 2003;56(3):589–602.
- Epstein RM, Franks P, Fiscella K, Chield CG, Meldrum SC, Kravitz RL, et al. Contrib Title: Measuring patient-centred communication in patient–physician consultations: theoretical and practical issues. *Issue Series Title: Soc Sci Med* 2005;61(7):1516–28.

18. Mitchell A, Cormack A. *Contrib Title: The therapeutic relationship in complementary health care*. London: Churchill Livingstone; 1998.
19. Long AF. *Contrib Title: Outcome measurement in complementary and alternative medicine: unpicking the effects. Issue Series Title: J Alternative Complementary Med* 2002;**8**(6):777–86.
20. Paterson C. *Contrib Title: 'Take small steps to go a long way' consumer involvement in research into complementary and alternative therapies. Issue Series Title: Complementary Ther Nurs Midwifery* 2004;**10**:150–61.
21. Somerset M, Campbell R, Sharp D. *Contrib Title: What to people with MS want and expect from health-care services? Issue Series Title: Health Expectations* 2001;**4**:29–37.
22. Richards RG, Sampson FC, Beard SM, Tappenden P. A review of the natural history and epidemiology of multiple sclerosis: implications for resource allocation and health economic models. *Health Technol Assess* 2002;**6**(10).

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