

# Aromatherapy: a survey of current practice in the management of rheumatic disease symptoms

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## INTRODUCTION

Rheumatic diseases are reported to be the largest single cause of physical disability in the UK and USA.<sup>1</sup> It is predicted that prevalence will increase as the general population ages, and by 2020, the number of people with arthritis in the USA will rise by nearly 50% to 60 million, with considerable economic consequences.<sup>2</sup> Since no cures exist to date, treatment strategies focus on management of symptoms and deferment of disability.

The primary symptoms of rheumatic diseases are pain and fatigue; these are often accompanied by stiffness and a vulnerability to depression.<sup>3,4</sup> The impact of pain and physical limitations associated with rheumatic diseases on patients' daily lives is considerable, and patients are naturally concerned about the possible side effects associated with long-term use of medication.<sup>5</sup> Hence, patients are willing to look towards complementary and alternative medicine (CAM) for symptomatic relief.<sup>6,7,8</sup>

Although little has been reported on the conditions aromatherapists treat, the reasons contributing to the use of aromatherapy are probably similar to those reported in general for CAM, for example: preventative measures, health enhancement, and to help treat specific illnesses;<sup>9</sup> a substitute for counselling;<sup>10</sup> and psychosocial distress.<sup>11</sup>

However, as with the majority of CAM, there is a dearth of research evidence to support the use of aromatherapy. Limitations such as small sample sizes, treatment regimes under test not typically representing clinical practice and common

methodological errors (such as blinding and randomisation etc)<sup>12</sup> limit the value of existing research.

Despite the lack of clinical aromatherapy research, pharmacological studies have provided evidence for the biological effects of several essential oils.<sup>13,14</sup> Research concerning massage may also provide a useful basis for assessment of the therapeutic effect of aromatherapy,<sup>15</sup> as some evidence suggests that essential oils may prolong the effects of massage.<sup>16</sup>

Research on aromatherapy is still in its infancy, yet its popularity among the general public<sup>17</sup> emphasizes the need to study both the therapy practice and the role of aromatherapists. Hence, the main aims of the current study were to investigate general aromatherapy practice, the conditions treated by aromatherapists, and the type of treatment employed for people with rheumatic diseases.

## METHOD

### Sample and sampling method

The Aromatherapy Organisations Council (AOC) was formed in 1991 to act as an umbrella organization representing the professional aromatherapist population in the UK. The Core Curriculum of minimum training standards for AOC members<sup>18</sup> is shown in Table 1.

Unfortunately, a simple random sample of aromatherapists was unattainable from the AOC

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**Table 1 AOC Core curriculum: training undertaken over at least 9 months involving 200 class hours**

Subject	Number of class hours
Anatomy and physiology	40
Massage (whole body)	60
Aromatherapy	80
Business, professional and ethical studies	20
15 case studies/50 treatments	outside class hours

Source: AOC General Information Booklet, p. 8 2000

Directory of Aromatherapists as it was being compiled at the time of the study (August 1999). Furthermore, the AOC consists of 12 associations, and access to each was limited. Therefore, the sample of professional aromatherapists was obtained by targeting the members living in the UK of one such association, the Register of Qualified Aromatherapists ((RQA)  $n = 500$  at the time of the survey).

### Procedure

The questionnaire was designed to provide predominantly descriptive information regarding aromatherapy training, practice and the treatment of rheumatic diseases; this paper will focus on the latter two areas of interest. The majority of questions asked were structured. However, open questions were also used in investigating treatments, to allow respondents to use either Latin or common names of essential oils; however, only Latin names were analyzed for accuracy.

The questionnaire was piloted among seven aromatherapists, of whom five were RQA members, and two were members of other AOC associations. This resulted in minor alterations to the questionnaire. A further sample of 15 aromatherapists (listed in a Yellow Pages directory for one area of the Midlands) were then contacted to test the modified questionnaire before the main distribution ( $n = 500$ ).

Reminders were sent to non-respondents 4 weeks after the initial mailing. Four weeks after the second mailing, a 'tick-one-box' form was sent to a random sample of 50% of non-respondents to assess the

reasons for not completing the questionnaire. For methodological rigour, a further copy of the questionnaire was also enclosed and analyzed separately to determine the potential non-response bias in the results.<sup>19</sup> For simplicity, the respondents of this follow-up group were called 'reluctant respondents'.

The Statistical Package for the Social Sciences (SPSS version 6) was used to generate the random sample of non-respondents, and to analyze the data using descriptive statistics and chi-square tests.

### RESULTS

The overall response rate was 54% ( $n = 269$ ), including 48% ( $n = 240$ ) who were currently practising aromatherapy. Table 2 illustrates the flow of response throughout the survey.

Analysis of the questionnaires completed by 'reluctant respondents' ( $n = 17$ ) indicated minimal variation in the results compared to respondents, hence the response bias appeared to be negligible.

### General overview

Demographics of the applicable respondents ( $n = 240$ ) indicated that 95% ( $n = 229$ ) were female with a mean age of 42.9 years ( $SD = 9.51$ ). The mean duration of practising aromatherapy was 4.2 years ( $SD = 3.1$ ), and 26% ( $n = 62$ ) of respondents were educated to degree level or above. All respondents were covered by professional indemnity or similar insurance. In addition, two-thirds of respondents (67%,  $n = 160$ ) practised other forms of CAM, predominantly reflexology (28%,  $n = 66$ ) and Reiki (22%,  $n = 52$ ). The majority of respondents either worked from their home (79%,  $n = 190$ ) or performed domiciliary visits (48%,  $n = 115$ ).

A high level of patient referral to and from other health professionals was evident. For example, 89% ( $n = 215$ ) of respondents had referred patients to other complementary practitioners (CP), particularly osteopaths (46%,  $n = 110$ ). In fact, the referral of patients to other CP was significantly correlated to the respondent practising other forms of CAM (Pearson  $r = 11.81$ , 1 df,  $P = 0.006$ ). In addition, 88% ( $n = 210$ ) of respondents had referred their patients to conventional health/medical practitioners, predominantly general practitioners and

**Table 2 Survey of aromatherapists: summary of response rates ( $n = 500$ )**

	Response rates		
	Initial mailing ( $n = 500$ )	Second mailing ( $n = 347$ )	Non-response follow-up ( $n = 117$ )
Percentage	31% ( $n = 153$ )	33% ( $n = 116$ )	33% ( $n = 39$ )*
Cumulative Percentage	31% ( $n = 153$ )	54% ( $n = 269$ )	62% ( $n = 308$ )

\*17 completed the questionnaire, and 22 completed the 'tick-one box' form

**Table 3** Survey of aromatherapists: conditions most frequently treated (*n* = 240)

Condition	Percentage of aromatherapists	
	Ranked the condition as 1**	Did not rank the condition at all
Stress	50% ( <i>n</i> = 101)	11% ( <i>n</i> = 26)
Musculoskeletal	34% ( <i>n</i> = 57)	25% ( <i>n</i> = 59)
Pain	27% ( <i>n</i> = 28)	51% ( <i>n</i> = 123)
General well-being	24% ( <i>n</i> = 28)	47% ( <i>n</i> = 112)
Relaxation	19% ( <i>n</i> = 27)	38% ( <i>n</i> = 90)

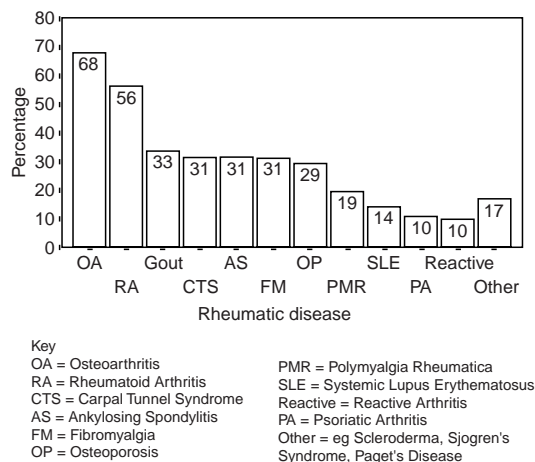
\*Respondents were asked to rank the conditions they most frequently treated from 1 to 5, where 1 was most frequent.  
\*\*Of those respondents who ranked the condition.

physiotherapists. Furthermore, 55% (*n* = 132) of respondents had patients referred to them by conventional health/medical practitioners. The referral rates of patients from conventional medical practitioners to aromatherapists and vice versa were also significantly correlated (Pearson  $r = 4.19$ , 1 df,  $P = 0.041$ ).

Table 3 shows the types of conditions treated by aromatherapists. Respondents were asked to rank the conditions they most frequently addressed (from 1 to 5, where 1 indicated most frequent). Five per cent (*n* = 12) of questions had missing data. Stress was the principal 'condition' addressed by aromatherapists, followed by musculoskeletal complaints. Moreover, back/shoulder/neck pain and rheumatic diseases were the predominant musculoskeletal conditions reported (41%, *n* = 98 and 28%, *n* = 66 respectively).

### Aromatherapy treatment of rheumatic diseases

Aromatherapy treatment for people with rheumatic diseases was reported by 74% (*n* = 178) of aromatherapists, with osteoarthritis (68%, *n* = 162) and rheumatoid arthritis (56%, *n* = 135) being the most prevalent disease type. Figure 1 illustrates the percentage of aromatherapists who had treated symptoms of specific rheumatic diseases.



**Fig. 1** Survey of aromatherapists: treatment of people with rheumatic diseases (Respondents were allowed to tick as many rheumatic diseases as appropriate.)

The frequency of treatments varied, although once a week was most often reported. However, due to the questionnaire structure, the grounds for which frequency was determined (e.g. stage of disease, severity of symptoms, clinical judgement etc) was not ascertained. To provide continuity between treatments, 98% (*n* = 229) of respondents typically provided essential oil blends for patients to use at home. When massage was not appropriate, compresses were commonly used by respondents (69%, *n* = 149).

Identification of the essential oils employed for common symptoms of rheumatic diseases caused some difficulty for respondents because they prescribed essential oil blends to suit the needs of individuals in practice. Nevertheless, Table 4 lists the essential oils most frequently reported by the respondents.

### Reluctant respondents

The response rate for the 'reluctant respondents' was 33% (*n* = 39), of which 17 returned a completed questionnaire. The reasons for not participating in the survey were disclosed by 22 members; the primary reason was 'too busy' (*n* = 7).

Analysis revealed no significant differences between 'reluctant respondents' and respondents in respect of practising other forms of CAM (Pearson  $r = 0.03$ , 1 df,  $P = 0.869$ ), or combining different forms of CAM with their aromatherapy treatments (Pearson = 0.54, 1 df,  $P = 0.463$ ). The referral rates of patients from conventional health/medical practitioners to respondents and 'reluctant respondents' were significantly different (Pearson  $r = 4.13$ , 1 df,  $P = 0.042$ ). However, due to the small number of 'reluctant respondents', inferential statistics could not be used to compare the referral rates of patients to both conventional health/medical practitioners and other CP.

Stress was the most frequently addressed condition among respondents and 'reluctant respondents'. In addition, 82% (*n* = 14) of 'reluctant respondents' had treated people with rheumatic diseases, compared to 74% (*n* = 178) of respondents. The frequency of treatment of individuals with osteoarthritis and rheumatoid arthritis was not

**Table 4 Survey of aromatherapists: essential oils frequently used for the common symptoms of rheumatic diseases**

Symptom	Essential oil	
Painful joints	<i>Lavendula angustifolia</i>	(lavender)
	<i>Rosmarinus officinalis</i>	(rosemary)
Stiffness	<i>Rosmarinus officinalis</i>	(rosemary)
	<i>Origanum marjorana</i>	(marjoram)
Inflammation of joints	<i>Chamomilla recutita</i>	(German chamomile)
	<i>Anthemis nobilis</i>	(Roman chamomile)
Pain	<i>Lavendula angustifolia</i>	(lavender)
	<i>Anthemis nobilis</i>	(Roman chamomile)
Depression	<i>Citrus bergamia</i>	(bergamot)
	<i>Rosa damascena</i>	(rose otto)
Anxiety	<i>Lavendula angustifolia</i>	(lavender)
	<i>Boswellia carterii</i>	(frankincense)
Fatigue	<i>Rosmarinus officinalis</i>	(rosemary)
	<i>Citrus limonum</i>	(lemon)

significantly different to that by the respondents (Pearson  $r = 0.54$ , 1df,  $P = 0.462$  and Pearson  $r = 0.04$ , 1df,  $P = 0.836$  respectively).

A wide variety of oils were identified from the surveyed practitioners for the treatment of symptoms of rheumatic diseases. This indicates, perhaps, the diversity of practice due to lack of clear guidelines and research evidence, which would substantiate the use of specific essential oils. Due to the large number of essential oils and the small number of 'reluctant respondents', a reliable trend of the essential oils used to treat symptoms of rheumatic diseases could not be identified in this group.

## DISCUSSION

The aims of the study were to investigate the practice of aromatherapy in the UK with a focus on the treatment of rheumatic diseases by aromatherapists. Key findings included: a high level of patient referral to and from other health professionals and CP, as well as the predominance of stress, musculoskeletal symptoms and pain among the conditions addressed.

The response rates for mail questionnaires typically vary between 30% and 60%.<sup>19-21</sup> Therefore, the overall response rate of 54% can be considered satisfactory. Three-quarters of the respondents had treated individuals with rheumatic diseases. However, although the results may be generalized to the members of the RQA (except the referral of patients to aromatherapists from conventional medical practitioners), generalizations to the wider aromatherapy profession in the UK should be made with caution.

The high level of patient referral between the respondents and conventional health/medical practitioners and other CPs suggests a degree of acceptance regarding the respective therapeutic approaches. This trend appears to contrast with the notion that CPs generally work in isolation.<sup>22</sup>

However, the nature of actual communication between the different health/medical practitioners remains to be investigated. For example, 'referral' might have been interpreted by respondents as advising a patient to seek help from a specific type of health/medical practitioner, or might have encompassed direct contact. Nevertheless, the two-way referral of patients between aromatherapists and health/medical practitioners or CP may enhance patients' confidence in discussing their treatments with all parties involved. This may be a reassuring observation as drug interactions with essential oils may be minimized and the risk of undiagnosed pathologies may also be reduced.<sup>23</sup>

Stress was the most prevalent 'condition' addressed by the aromatherapists, which possibly reflects the current trend towards the use of CAM as a health-promoting measure.<sup>9</sup> This finding is noteworthy, given the reported association between the use of CAM with distress and the need for counselling.<sup>10,11</sup>

The second and third most frequently treated conditions by respondents were musculoskeletal symptoms and pain respectively. Research regarding the mechanism for pain relief through massage is inconclusive. 'General well-being' and 'relaxation' were the fourth and fifth most frequently addressed 'conditions', thus linking the use of CAM for stress management. This also supports the concept that people will actively seek CAM to help achieve a good quality of life.<sup>24</sup>

The percentage of respondents who did not rank the top five conditions at all merits some attention. For example, just over half the respondents did not rank pain, and only 38% of respondents did not rank relaxation; yet these were the third and fifth most popular conditions to be ranked highest respectively in terms of frequency of treatments (Table 3). Therefore, treatment for relaxation was more widespread among respondents, although the frequency of treatments for relaxation was less than that for pain.

## Treatment of rheumatic disease symptoms

The use of CAM by people with rheumatic diseases has been well documented<sup>6,7,8,25</sup> and accords with our findings; 74% of respondents had treated at least one person with a rheumatic disease. Osteoarthritis and rheumatoid arthritis were the most prevalent types treated, perhaps because these are the most prevalent types of arthritis.

The essential oils selected by aromatherapists for rheumatic diseases depend on the signs and symptoms expressed by patients.<sup>26</sup> *Lavendula angustifolia* (lavender) was most frequently used by respondents for painful joints, pain and anxiety. While research on the analgesic properties of lavender have been inconclusive,<sup>27</sup> *L. angustifolia* was found to decrease pain perception in people with rheumatoid arthritis, but not their visual analogue scale scores.<sup>28</sup>

Claimed benefits of some essential oils, however, can be linked to pharmacological and physiological studies. For example, both *Anthemis nobilis* (= *Chamaemeleum nobile*, Roman chamomile) and *Chamomilla recutita* (= *Matricaria reculita*, *Matricaria chamomilla*, German chamomile) were frequently prescribed by respondents for pain and inflamed joints. This anti-inflammatory activity has been attributed to the chemicals chamazulene and alpha bisabolol present in the oils.<sup>13,29</sup> In contrast, several essential oils were indicated by respondents for the treatment of depression and anxiety. This is probably due to the multitude of circumstances that lead to, or are associated with, these symptoms or, indeed, the uncertainty surrounding the specific action of such oils.

If CAM practice is to become evidence-based,<sup>30,31</sup> pharmacological and physiological studies may complement the more 'holistic' or clinical-based trials by determining the biochemical pathways of essential oils.

## Limitations

Four limitations of this study should be noted. Firstly, aromatherapists have not been surveyed about their treatments of people with rheumatic diseases before, hence, a new questionnaire had to be developed. Secondly, a level of response bias is unavoidable in survey research despite procedures used to follow-up non-respondents. Thirdly, without accessing the patients, it is impossible to deduce whether symptomatic relief of rheumatic diseases was the primary reason for using aromatherapy or secondary to another problem. Finally, the generalizability of results are restricted to one member association of the AOC, the RQA.

## Future studies

Possible studies to elicit a more accurate overview of the clinical practice of aromatherapy may involve

interviewing a sample of aromatherapists treating people with rheumatic diseases. To gain the perspective of patients with rheumatic diseases, a survey of rheumatology patients investigating the role of aromatherapy in the management of rheumatic disease symptoms, is currently underway.

It is anticipated that the results of the survey of patients with rheumatic diseases, together with the results of this survey, will provide a clear overview of the use of aromatherapy in the management of rheumatic diseases. Furthermore, the results may also provide an informed basis for future clinical studies.

## CONCLUSIONS

The current survey has provided an insight into current aromatherapy practice in the UK. The scope of aromatherapy for treating both psychological and physical conditions was highlighted, and key issues identified included the high level of patient referral to and from other health/medical practitioners (complementary and conventional), and that stress, musculoskeletal complaints and pain (the principal symptoms of rheumatic diseases) were the conditions most frequently treated. Moreover, the majority of aromatherapists had treated more than one person with a rheumatic disease. This would suggest that aromatherapy may have a potential role in the management of rheumatic disease symptoms.

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