



A pilot study addressing the effect of aromatherapy massage on mood, anxiety and relaxation in adult mental health

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KEYWORDS

Aromatherapy;
Mental health;
Anxiety;
Massage;
Relaxation

Summary This study was carried out with eight subjects specifically referred for aromatherapy; each received a standardised aromatherapy massage weekly for 6 weeks. The subjects' levels of anxiety and depression were measured using the Hospital Anxiety and Depression (HAD) Scale prior to the first massage and after the final massage. The subjects' levels of mood, anxiety and relaxation were recorded using a visual analogue before and after each massage and then again 6 weeks after the last massage. Comparison was made between the HAD Scale results for each client and also the visual analogue scale results for before and after massage and also first massage and 6 weeks postmassage for the sample group. Improvements were shown in six out of eight subjects' HAD Scale results. Improvements were also shown in all areas when comparing the visual analogue scale results. The study was carried out over an 8-month period. To date there have been few studies addressing the effect of aromatherapy massage on mood, anxiety and relaxation (Therapist 9 (1996) 38). It is acknowledged that there may be a number of reasons for this such as factors related to obtaining a sample group, informed consent, the interaction of current medication regimes and so forth. It is acknowledged that whilst this is a small pilot study a number of methodological issues are raised concerning research into the use of aromatherapy in this clinical field. By reporting on this work, it is hoped that this paper will generate reflection, discussion and debate so forwarding the knowledge base in this discipline.

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Background

Aromatherapy has been defined as "the controlled use of essential oils to maintain and promote physical and mental well being".¹ It is known that at the beginning of the 17th century about 60 oils were used in medicines and perfumery. In the 18th and 19th centuries scientists were first able to identify the components of plant chemistry.² With research these active components were extracted

from medicinal plants, which in turn led to and became the basis of the development of pharmaceutical preparations and a subsequent rejection of plant medicine. In the 1920s, largely due to the efforts of a French chemist, Gattefossé, a revival in the use of plant oils came about. Gattefossé discovered that Lavender oil was extremely effective in the treatment of burns and that many essential oils had more effective antiseptic qualities than their synthetic counterparts.^{3,4} A French army surgeon Dr. Jean Valnet read Gattefossé's research and used essential oils to treat soldiers wounded in battle in World War II, with great success, and later set up a clinic and used essential

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oils to treat psychiatric patients. In the 1940s an Austrian biochemist, Marguerite Maury was researching the penetration of essential oils through the skin. She felt that external application could be more beneficial in some ways than internal administration and proceeded to develop the technique of using essential oils in massage, as we know it today.⁵

Literature review

There are a number of essential oils not recommended for use during pregnancy. These being oils that are known to have neurotoxic, emmenagogue or abortifacient and hormonal properties (chapter 8 of Ref. 2). This information was utilised in the selection of oils appropriate to be used in this study as the therapist was pregnant. There have been a number of research projects investigating the therapeutic effects of essential oils, with the most valuable being in the areas of coronary and intensive care.^{6,7} Lavender oil and its effects are particularly well documented.

It has been shown by Woolfson and Hewitt⁶ that foot massage using Lavender essential oil with patients in coronary and intensive care, was effective in lowering blood pressure, heart rate, respiratory rate, wakefulness and pain. Results indicated that although massage alone is beneficial, the greatest benefits in all areas tested were experienced when essential oils were used as well.

A similar study by Stevensen⁷ investigated the effects of foot massage using neroli essential oil on cardiac patients in intensive care. Physiological and psychological tests showed statistically significant differences between the groups that received massage with or without essential oil and the two control groups. In addition to this it was found that the effects of using essential oils with massage were more relaxing, calming and restful and were longer lasting. This trial also indicated that while massage alone is beneficial, massage with essential oils gives enhanced longer lasting benefits.

The majority of studies into the effectiveness of using massage, aromatherapy and essential oils have been undertaken in the field of general medicine;⁶⁻⁸ however, there has been some research in the field of mental health.

Bortoft⁹ has investigated the effects of aromatherapy and massage in mental health; the impression after a period of several years treating both the elderly and adults is that "aromatherapy and massage for mental health is well worth investigating further" (p. 40). A research approach

was not applied however, qualitative information from client feedback and observation was utilised. It was felt that a number of individuals with a history of self-harm had responded very positively to sessions, experiencing a sense of relief from difficult feelings. Clients in an acute ward and a Mental Health Centre reported that they had found aromatherapy "comforting" or "relaxing and enjoyable" (p. 39).

It has been found that aromatherapy and massage have also been effective in the treatment of adolescents with mental health difficulties. Jelinek¹⁰ used aromatherapy during psychotherapeutic intervention with a 14-year-old boy. He felt that the aromas of essential oils triggered an emotional response in his client and assisted in accessing memories of the distant past and concluded that from his experience aromatherapy can "target and influence very deep and personal levels to which the access is complicated" (p. 102). In his view aromatherapy could act as a natural catalyst for emotional responses. Field¹¹ researched the effects of massage with child and adolescent psychiatric patients. Children and adolescents with depression and adjustment disorder following massage were less depressed and anxious and showed lower levels of saliva cortisol than a control group. Also nurses rated subjects as being more cooperative and less anxious and as sleeping for longer periods. The authors concluded that the results indicated reduced anxiety in the short term and also over the longer term with the depressed subjects and that massage may have positive effects on this client group.

Brooker¹² investigated the effects of aromatherapy and massage on levels of agitation in clients with severe dementia. A single case study design was utilised, with each participant acting as their own control and receiving aromatherapy only (lavender oil), massage only, aromatherapy massage (lavender oil) and no treatment sessions. Results indicated that out of the four clients studied only one could be said to have benefited from aromatherapy and two clients displayed an increase in disturbed behaviour after some sessions. The authors concluded that there appeared to be no benefit for this client group in combining aromatherapy with massage. Although the study is focused in the area of mental health the needs of the client group are not comparable to those of the subjects in the current study.

Although there is some research, as indicated above, into the effects of aromatherapy and massage in mental health there is a general lack of research on the effects of aromatherapy massage specifically with adults with mental health

Table 1**(a) Diagnoses**

Diagnosis	No. of clients
Schizophrenia	1
Psychotic depression	1
Anxiety with depression	6

(b) Additional information

Gender	Age (Years)	Length of time attending Day Hospital
Female	61	3 weeks
Female	51	3.5 months
Female	60	1 month
Female	62	2 months
Female	53	7 months
Female	33	6 months
Female	32	2.5 years
Female	37	6 months

difficulties. This premise formed the basis for the following pilot study being undertaken.

Aim

The aim of the study is to evaluate the effect of current aromatherapy sessions on clients' levels of mood, anxiety and relaxation.

Method

Hypothesis

That aromatherapy massage will reduce clients perceptions/feelings of anxiety and promote relaxation.

Sample

Eight clients were studied, each had been referred either by their consultant psychiatrist or day hospital keyworker and each had an *International Classification of Diseases 10 diagnosis*. This is a system of categorising mental disorders, which is recognised and utilised internationally by medical practitioners in mental health.¹³ All clients referred for aromatherapy were placed on a waiting list that was worked through chronologically. Clients were treated within an adult day hospital setting and all were day patients. All clients referred were seen

for an initial consultation/assessment. The selection criteria used for this study was that aromatherapy treatment was offered to clients for whom there were no contraindications identified during or prior to the initial consultation. Any contraindications i.e. acute mental health issue, acute physical health issue, acute physical health issue, or first trimester pregnancy identified during the initial consultation session were communicated to the consultant psychiatrist or day hospital keyworker and aromatherapy was not offered. The reason for treatment not being offered was recorded in the client's aromatherapy notes. Only one client had previous experience of aromatherapy and this had been under the same conditions as this study with the therapist who conducted this study. The range of diagnoses of the subjects and additional information is indicated in [Table 1a](#) and [1b](#).

Design

This was a repeated measure study. The Hospital Anxiety and Depression (HAD) Scale was administered immediately prior to the first treatment and immediately after the last treatment. The HAD Scale was applied in this way as it is indicated for short, medium and long-term use and is not appropriate to pick up immediate changes. A 10cm visual analogue measuring level of mood, relaxation and anxiety was administered immediately before and after each massage to identify immediate changes and again 6 weeks after

treatment was completed. The visual analogue scale was designed by the author and had not been tested for validity or reliability. The clients acted as their own controls within this study. The most appropriate areas of effect to investigate were identified by focussing on the most commonly selected areas of benefit on a questionnaire designed by the author and completed by 10 clients that had previously received this treatment.

Procedure

Each client was seen for six aromatherapy massage sessions of 1 hr duration and an initial consultation session. The massage was performed at the same time of day and day of the week for each client. The environment was set up in the same way prior to each massage and a specific room was allocated for aromatherapy use. Each client received the same standardised massage technique from the same therapist although the essential oils were selected and blended specifically for each session/individual client. The therapist, Jenny Edge, is an Occupational Therapist with 12 years' experience of working in the NHS and holds an International Federation of Aromatherapists recognised Diploma in Aromatherapy obtained through Aromatherapy Associates, London. The therapist was pregnant at the time of study and therefore the range of oils appropriate to use in this study was limited. The oils used were selected from a range of oils safe to use during pregnancy and effective in the treatment of anxiety, depression and those with a sedative/relaxing effect. The choice of oils for each massage was based on a consultation carried out at the beginning of each session and feedback obtained from the previous session. The selection of specific oils was based on knowledge of the properties of oils from the therapists' training and experience and also as described by Mojay.¹ Trust policy also required that any complementary therapists practising within the trust receive regular clinical supervision from a suitably qualified professional. The supervisor in the case of this study worked outside of the trust and was RGN and aromatherapy trained holding an ITEC diploma. All treatments given including oils selected were discussed with and justified to the supervisor during fortnightly sessions. The HAD Scale was administered with each client before the first session and following the last treatment session. The HAD Scale was selected as this is a standardised test specifically designed for hospital use. Each client was also asked to complete a rating scale before and after each massage and at an interval of 6 weeks

following the completion of treatment. The NHS Trust within which the study was carried out had a Complimentary Therapies Policy, which was adhered to. Written consent for treatment was requested from each client's consultant psychiatrist prior to aromatherapy sessions commencing, this was recorded in the medical notes. The therapist approached each client after the period of study to discuss using the outcomes of sessions within a research article intended for publication, the clients had an opportunity to ask questions and then if they were agreeable to this they signed a consent form.

Evaluation

Short term

Comparison was made between the before and after massage rating for each massage with each client. The HAD Scale scores for each client before and after treatment were also compared.

Medium term

Comparison was also made between the initial rating scale and that administered 6 weeks post-massage for each client.

Results

The analysis of the results from the visual analogue scale scores shows a mean improvement in all areas ($N = 8$) (Fig. 1). There was a 50% improvement in level of relaxation and anxiety and a 30% improvement in level of mood between the rating scales that were completed before and after each massage (Table 2).

A comparison of results of the first massage visual analogue score and the 6-week postmassage score shows a mean improvement in all areas (Fig. 2).

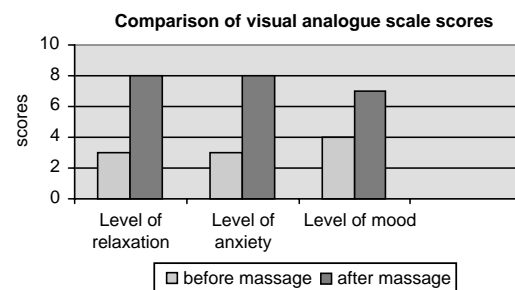
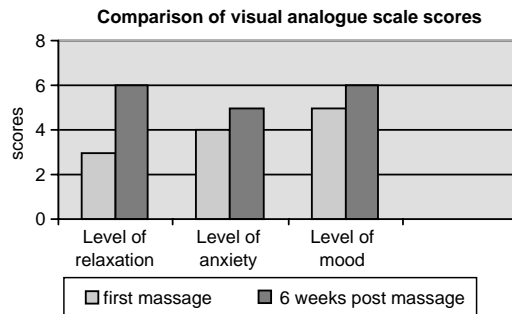
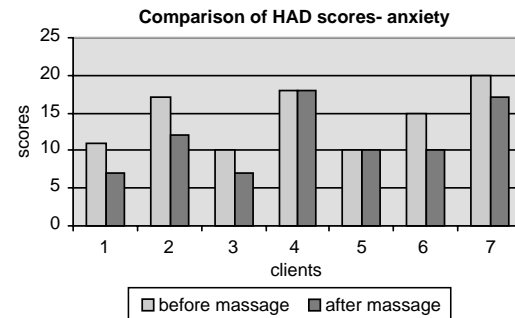
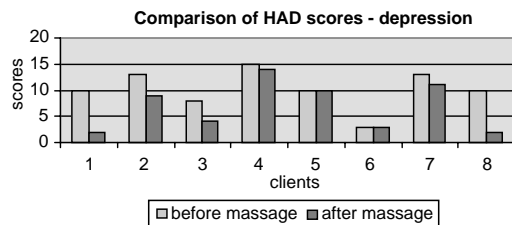


Fig. 1

Table 2 A comparison of visual analogue scale scores.

Visual analogue	Level of relaxation	Level of anxiety	Level of mood
First massage score (mean)	3	4	5
Before massage score (mean)	3	3	4
After massage score (mean)	8	8	7
Before and after improvement	50%	50%	30%
6 weeks postmassage score (mean)	6	5	6
First and 6 weeks postimprovement	30%	10%	10%

**Fig. 2****Fig. 4****Fig. 3**

There was a 30% improvement in level of relaxation, a 10% improvement in level of anxiety and a 10% improvement in level of mood (Table 2).

The analysis of the HAD Scale score shows an improvement in anxiety dimension in six out of eight clients (Fig. 3). The two clients whose scores did not improve showed no change. The depression dimension scores of six out of eight of the clients also showed an improvement (Fig. 4). The two clients whose scores showed no improvement did not change. Only one client showed no improvement in either the anxiety or depression dimensions (Table 3).

Discussion

The results of this study follow a similar pattern to the findings of Stevensen⁷ where massage with an essential oil was shown to have a positive effect on both levels of anxiety and relaxation over a short-

term period. The same is true of the Woolfson and Hewitt⁶ study where the physical effects of massage with an essential oil indicated an increased level of relaxation and decreased level of anxiety again over a short-term period. These studies did not however investigate levels of mood or depression and the methodologies were different. Within the studies carried out within mental health it has been shown that both massage and aromatherapy can have a positive effect on this client group.⁹⁻¹² The specific areas of mood, anxiety and relaxation have not been investigated previously within mental health; however, the positive results from this study would support the conclusions from previous studies. It is also possible that combining these two interventions, massage and aromatherapy, that have been shown to be independently beneficial with this client group, may enhance the positive effects.

It can be seen that a consistent improvement was shown in each area (levels of mood, relaxation and anxiety) when comparing the visual analogue scales before and after each massage. Improvements were also shown in level of anxiety and depression measured using the HAD Scale for six out of eight subjects, one subject experienced no improvement in either level of anxiety or depression.

There was also an improvement shown between the first massage visual analogue scale results and those of 6 weeks postmassage, however, this is less marked than the improvement shown in the before and after massage visual analogue scores.

Table 3 A comparison of hospital anxiety and depression scale scores.

Client	HAD score before—anxiety dimension	HAD Score after—anxiety dimension	HAD score before—depression dimension	HAD score after—depression dimension
1	11	7	10	2
2	17	12	13	9
3	10	7	8	4
4	18	18	15	14
5	10	10	10	10
6	15	10	3	3
7	20	17	13	11
8	11	7	10	2

It is possible that external factors may have influenced the outcome. It is likely that the Day Hospital environment felt safe to the clients as all but two of them had been attending for over 2 months also the therapist was known to all but one of the clients prior to receiving aromatherapy. These factors may positively affect the clients' likelihood of experiencing improvement and also the degree of this perceived improvement particularly immediately after the sessions. These factors may need to be limited in future study. Aromatherapy sessions could be offered on a different site, with a therapist that is previously unknown to the clients and within a certain number of weeks of date of admission thus reducing the possible effects of familiarity and the impact of resultant feelings of trust and safety.

The subjects within this study were taking a range of psychotropic medications and were not standardised with regard to this. The type of medications and time they were administered could have an impact on the findings. The effect of this can be limited by standardising the sample group according to the type of medication they are taking and at what time of day. Thus the likely impact of medication would be comparable between all subjects.

The range of diagnoses of the sample may have had an effect on the outcome particularly in the area of mood as none of the clients studied have a primary disorder of mood. It is therefore not surprising that the improvements shown in mood are less marked than in level of relaxation and anxiety. A future study on the effect of aromatherapy on mood would be more appropriately investigated using a sample group with a primary diagnosis that is specifically related to mood.

This study is limited through the lack of the inclusion of a control group of subjects who

received a massage without essential oils or purely a period of 1 hr rest. This would have been useful, as it would have generated results with which to make a comparison. Through making this comparison it is possible to determine whether improvements made are directly related to the aromatherapy massage received, without a control group it is not possible to establish this.

Since all subjects included in this study were also receiving other treatments for all or part of the period of the study the medium term improvements cannot be specifically related to the aromatherapy massage received.

The small sample size for this study (8) has a limiting effect as it influences the reliability of the results and therefore it is not possible to generalise them. The sample size also prevents any statistical correlations being made.

Another potential limitation is that each client received individualised treatment as they were massaged with a blend of oils specifically selected for their needs at that time. However regardless of the oils used each client showed a positive effect from receiving essential oils via massage and therefore each client acted as their own control. It is not possible to look at the effects of specific oils within this study. This could be a consideration for future study where clients could be standardised according to diagnosis and the blend of essential oils administered.

The therapist was pregnant at the time of study, which affected the range of oils that could be worked with and the dilution used. These factors would not adversely effect the validity or reliability of the study. The therapist's physiological state did not affect any other aspects of the treatment received. The sample of clients used was specifically referred for aromatherapy rather than being a random sample of day hospital clients which affects

the validity of any results generated. The entire sample used was female; ideally there would be an equal mix of male and female clients.

The rating and HAD Scales were administered by the therapist within the sessions. This may have influenced the outcome as the clients may have been more likely to respond positively in the presence of the therapist. This could be limited in a future study by involving a member of staff unrelated to the aromatherapy in administering the measures outside of the aromatherapy sessions.

All subjects were attending the Mental Health Day Hospital and some had contact with other healthcare settings/professionals where a variety of psychological interventions were on offer. It is possible that the type and frequency of other treatments received could influence the findings of this study in the short and medium term and previous positive experience of psychological therapies may have a positive effect on the degree of benefit clients experience as a result of aromatherapy.

To date there have been few studies addressing the effect of aromatherapy massage on mood, anxiety and relaxation in adult mental health.⁹ It is acknowledged that there may be a number of reasons for this. For instance, factors associated with obtaining a sample group, informed consent, the interaction of current medication regimes and so forth. It is acknowledged that whilst this is a small pilot study, a number of methodological issues are raised concerning research into the use of aromatherapy in this clinical field. By reporting upon this work it is hoped that this paper will generate reflection, discussion and debate so forwarding the knowledge base in this discipline.

Conclusion

This study shows some positive results indicating that aromatherapy massage improved levels of mood, relaxation, anxiety and depression in the short term with the medium-term effects being less marked. However, there are a number of limitations that would affect the reliability and validity of these results.

As a pilot study some useful information has been produced which indicates that further research in this area would be worthwhile.

Some useful changes could be made to this study, which are important considerations for future research. It would help to focus the study and outcomes if the sample group was standardised according to diagnosis, e.g. primary diagnosis of

anxiety and also if the sample was randomised. The study would benefit from a larger sample size, which would also require an additional time commitment and perhaps due to this, separate funding. It would be preferable to have all tests administered outside of the sessions by a member of staff not known to the client or at least not by the therapist. A future study would benefit from the inclusion of a control group to establish whether or not outcomes are directly related to aromatherapy. These developments would improve the reliability and validity of the results generated.

The author plans to proceed with future study focussed specifically on anxiety taking into account the limitations of this study. It has been suggested that research into the effects of aromatherapy on staff stress levels may also be a useful area of study.

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