A pilot study assessing art therapy as a mental health intervention for subfertile women

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Submitted on August 13, 2010; resubmitted on October 13, 2010; accepted on November 15, 2010

BACKGROUND: Subfertility is a common but hidden source of anxiety, depressive symptoms and hopelessness. Counselling reduces this emotional burden and may even enhance the likelihood of pregnancy. Art therapy may be a useful intervention, because it facilitates the expression of feelings, both visually and verbally, and may ease emotional distress.

METHODS: Weekly 2-h art therapy group courses were held for a total of 21 subfertile women. The impact of subfertile women’s support systems and barriers to coping were all explored. The effectiveness of art therapy was assessed using Beck Hopelessness, Depression and Anxiety Inventories, administered before and after participation, as well as a qualitative exit questionnaire.

RESULTS: The mean age of participants was 35.7 (SD 2.1) years and duration of infertility was 64 (12.0) months. Mean Beck Hopelessness Scale fell from 6.1 (3.8) to 3.5 (3.1, P = 0.01) after therapy. Beck Depression Inventory-II Score fell from 19.8 (11.0) to 12.5 (10.2, P = 0.01) and Beck Anxiety Inventory Score changed from 12.4 (8.4) to 8.4 (5.2, P = 0.3). Based on the exit questionnaire, women felt the course was insightful, powerful and enjoyable.

CONCLUSIONS: Art therapy is an inexpensive, non-pharmacological intervention, which was associated with decreased levels of hopelessness and depressed mood in subfertile women. It also provides insight into the meaning and emotional implications of subfertility for patients and caregivers. This pilot study highlights the need for further research in this field.

Key words: art therapy / infertility / anxiety / depressive symptoms

Introduction

Subfertility affects ~10% of couples and often gives rise to depressive symptoms, anxiety and marital discord (Andrews et al., 1991; Royal Commission on New Reproductive Technologies, 1993; Brkovich and Fisher, 1998). Negative effects of subfertility on quality-of-life may be stronger for women than for men (Andrews et al., 1991; Abbey et al., 1994). While the diagnosis and treatment of fertility problems are natural priorities for most fertility clinics, some patients also need psychological support. Individual and group counselling have already been shown to improve psychological well-being and may even increase the likelihood of successful pregnancy (Sarrel and DeCherney, 1985; Newton et al., 1990; Domar et al., 2000; Lemmens et al., 2004, Schmidt et al., 2005).

Art therapy is a relatively new type of intervention that differs from standard cognitive-behavioural ones. It combines psychodynamic, humanistic, educational and other therapeutic approaches. The client creates art images ‘to help express who we are, to express feelings and ideas that words cannot and to enhance life through self-expression’ (Malchiodi, 1987). Art therapy has the powerful advantage over verbal and written communication of visibly showing clients how they are thinking and feeling, allowing them to acknowledge and understand hidden thoughts and feelings. Art therapy combines art activities with verbal exploration of the art product to facilitate understanding of the client’s issues and concerns. The client does not need any artistic ability. In fact, avoiding focus on the ‘quality’ of the work produced is an important element of this work. Instead, ‘art’, as shown in examples throughout this paper, is used as a means of concrete rather than verbal communication, allowing both conscious and unconscious expression. There are two main elements to the process: the first is the creation of visual images, which may be very simple and diagrammatic, and the second is their consideration by the patients in concert with a trained art therapist. In a group setting, interaction with other patients provides a further avenue for understanding and support. This approach has been successfully used as a healing tool in situations of physical and emotional abuse, cancer care and incarceration. (Deane et al., 2000). In the field of infertility, experience is limited (Domar et al., 2000; Lemmens et al.,...
2004). Given the depth and extent of grief that many infertile patients experience, and the difficulties that some have in verbally expressing these negative feelings, it was hoped that art therapy might provide a useful alternative to standard counselling and supportive psychotherapy.

The current observational study, with before- and after-measurement of trait characteristics and a qualitative exit questionnaire, was designed as a pilot to assess the potential benefits of art therapy for subfertile women. Its objectives were to develop and evaluate a structured art therapy programme for subfertile women, using standardized psychometric testing and qualitative data collection.

Materials and Methods

The study design and art therapy programme were approved by the Hamilton Health Sciences Hospital Institutional Ethics Review Board. A physician obtained informed consent for participation and an accredited art therapist led sessions.

Participants

A group of 21 women attending the Hamilton Health Sciences fertility clinic for ongoing fertility care consented to join the study. A diagnosis of clinical depression was the sole exclusion criterion, though none of those volunteering for the programme fell into that diagnostic category. However, it was felt that for safety reasons, patients with clinical depression should be referred directly for psychiatric assessment and treatment. Uptake into the programme was voluntary and therefore quite selective; women who accepted were enthusiastic about the prospect, while many women declined this and other forms of counselling and self-help opportunities offered by the clinic. Enrolees also kindly consented to allow images that they created to be used anonymously for education and publication.

Women were in active fertility treatment at the time of enrolment. These modalities included ovulation induction, intrauterine insemination and assisted reproductive technologies. Their mean age was 35.7 (SD 2.1) years and duration of subfertility was 64 (12) months. The primary diagnoses were tubal disease (5), male factor (5), unexplained subfertility (4), endometriosis (4) and oligo-ovulation (3).

Development of interventions

The programme was designed after a focus group was convened, including three subfertile women patients’ two artists, an art therapist and a physician, for the purpose of exploring experiences and feelings commonly associated with subfertility. Focus group results were used as a basis for a more formal needs assessment, conducted using structured interviews with 12 more female patients. These interviews were used to identify experiences common to most patients in order to guide the direction and content of art therapy group sessions. Two reviewers explored written interview summaries to identify common themes. These included: the unforeseen nature of subfertility; guilt over waiting too long to seek help; fear that the problem would remain unresolved; frustration and anger with the delays in accessing care; pain, stress and costs associated with treatment; and difficulty communicating about this issue with family and friends. These elements were then used to formulate specific tasks that formed the basis of the art therapy programme. For example, the feelings and fears surrounding infertility were dealt with during the ‘body mapping’ session and the costs of treatment were considered during the ‘before and after infertility’ session. The ‘family tree’ model was used to address the issues of communication between family members.

Description of sessions

Two-hour art therapy sessions were run in the evenings once weekly, for 8 weeks, with four to seven women per group. The first session focused on introductions and informed consent for the study. Written and verbal information was given to patients, outlining a plan of care should they perceive worsening depression during the course. The eight group sessions were semi-structured and employed a different art therapy technique each week. These included the making and decorating of a portfolio as an introduction to the art therapy process. Next, ‘body mapping’ was used to allow patients to draw, rather than speak about, their body-related emotions, with different coloured marker pens on a pre-drawn body outline (Fig. 1). Using markers and paper, patients were asked to draw what subfertility meant to them (Figs 2 and 3). A hand painting was used, with acrylic paint on canvas, to explore individuals’ perceptions of their own strengths and weaknesses (Fig. 4). A drawing of a tree allowed them to explore their communication difficulties and personal relationships with family and friends who provide support and strength. Finally, a group painting was made on canvas, where individuals presented a building or place in a town of hope, bringing the group together. These last three techniques were adapted from the work of Sawicki (1992).

During creative times, patients tended to work quietly and remain focused. At other times, discussion and sharing was vigorous. Notes were made after each session by the art therapist, recording salient features of the evening, along with pertinent quotations from participants. All work was photographed and then given back to the participants.

Figure 1 ‘Body mapping’, a technique used to identify and position important and relevant emotions such as anger, sadness and love, on a pre-drawn body outline. In addition, this example shows a figure riddled with spots or holes, reflecting the client’s perception of being ‘diseased’.
Assessments

A clinical psychometrist administered psychometric tests during the first and last sessions. These included the Beck Anxiety Inventory, Beck Depression Inventory-II and Beck Hopelessness Scale (Beck et al., 1997).

All participants completed an exit-questionnaire. This focused on their prior knowledge of art therapy, issues that were dealt with during sessions, likes and dislikes regarding the process and their overall level of satisfaction with the programme. The questionnaire was not a validated tool, but was used to generate clinical impressions. Its results were systematically assessed and recurring themes were identified.

Analysis

The results of pre- and post-intervention psychometric test scores were compared using Paired t-tests, since both groups of data were from the same individuals.

Results

Quantitative data

The results of pre-test psychometric scores were all in the range of mild emotional compromise (Table 1). At the end of the 8-week course, all scores had fallen below that threshold, reverting to the normal range. Clinically and statistically significant reductions were seen in Beck Depression Inventory-II Scale and Beck Hopelessness Scale (both $P = 0.01$; Table 1), while the change in Beck Anxiety score was not statistically significant ($P = 0.3$).

Clinical impressions

The artwork produced by subfertile women was often remarkable, proving highly informative to both clinicians and patients. This was particularly true of pictures created in response to the question ‘what does subfertility mean to you’. The example shown in Fig. 2 is a simple line drawing depicting the patient and her husband, separated spatially by their individual grief, but each carrying the same void in their core, representing their inability to conceive. Similarly, in Fig. 3, a woman’s impression of infertility is one of grave disappointment at the failure of her dream to materialize. She saw her fertility as a

**Figure 2** A response to the question ‘What does infertility mean to you?’ This woman drew herself and her partner, physically separated, but sharing the same ‘hole in their soul’, a symbol of the loss and grief of subfertility.

**Figure 3** Another response to the question ‘What does infertility mean to you?’ This woman described infertility as being ‘like planting a tulip bulb and waiting all year to see it bloom and it doesn’t! It is so disappointing!’

**Figure 4** A hand drawing was used to allow women to identify and show their personal strengths that are crucial in coping with subfertility.
carefully tended flower, which after much time and effort, had failed to bloom.

Figures 1 and 4 provide examples of ‘body mapping’ and ‘hand drawing’. Through body mapping, women were able to show their feelings of being ‘diseased’ as depicted by spots or cracks as well as the physical sites to which they attached emotions. For example, women often depicted the site of anger and frustration in their throats. Hand drawings (Fig. 4) as well as graphic representations of ‘family trees’ (not shown) were used to highlight personal supports and strengths, aimed at improving self-esteem.

### Qualitative assessment of closure questionnaires

Questionnaires were evaluated by two reviewers and eight key themes were identified:

- The concept of art therapy was not well understood by women prior to enrolment.
- Key issues raised by the sessions varied greatly from person to person. The results of art projects were sometimes unexpected and surprising. The act of painting and creating was intrinsically pleasurable.
- Comfort was gained in seeing, as well as hearing, other women describe their experiences.
- The ability to laugh with each other about the stresses faced was common and appreciated.
- Difficulty and pain were experienced in facing the reality and burden of infertility.
- The course was too short—longer than 8 weeks would have been appreciated.

The level of satisfaction with this programme, as expressed through the exit questionnaires, was extremely high. This was reported using a Likert scale, ranging from ‘very dissatisfied’ to ‘very satisfied’. Of 21 completed questionnaires, 18 reported ‘very satisfied’ and three ‘satisfied’. Selected quotes from these questionnaires include: ‘Art therapy is more than drawing or painting; it’s an exploration of emotions and an opportunity to discuss issues with people in similar situations’; ‘Art therapy is much more relaxing and fun than other forms of verbal therapy’; ‘I felt emotionally supported by having other women with me who truly understand our pain’. Women generally felt that art provides a ‘safe place’ to express difficult emotions such as anger and guilt. Several women reported that they continued to create art as therapy on a regular basis. All groups retained some informal contact after courses were complete.

From the therapist’s notes, it was clear that the initial fear of creating art in a group setting was quickly overcome. Women reported that they enjoyed the creative process and perceived many benefits, including stress reduction, validation of feelings, self-awareness and improved self-esteem, and they felt encouraged in problem-solving and decision-making efforts.

### Discussion

The administration of an art-therapy-based support programme for subfertile women was associated with improvements in key mental health indices. Clinically and statistically, significant reductions in levels of depressed mood and hopelessness were noted after eight group sessions. Although none of the women were clinically depressed before the programme, the change in psychometric scores was favourable. Based on the qualitative data and clinical impressions, the programme was largely enjoyed and valued by women. The cost and difficulty in providing this opportunity were low. Few materials were required, and although an enthusiastic, accredited art therapist was needed to design and lead the sessions, her time commitment was limited to ≏ 4 h per week.

Although this programme was judged to be positive and helpful, these findings require further validation. The current study was a ‘pilot’ employing patients as their own controls, in a before and after comparison. A more rigorous study would include a parallel control group of patients receiving an alternative or ‘placebo’ intervention. Only by randomizing within such a framework, can the independent effects of an intervention like this be truly measured. The self-selection of patients for the programme may also influence outcomes of this pilot study. Although reasons for refusing or accepting enrolment were not sought, clearly patients who enrol or decline may differ in important ways. Thus, the results of this and other clinical studies should be interpreted with caution; it is not appropriate to extrapolate the results from them to all patients. A further weakness lies in the structure of the exit questionnaire. It was not validated as a tool, but was designed to focus on the key points of interest to the researchers, as they assessed the value and patients’ perceptions of the programme. Again, prior to a more rigorous clinical trial of this intervention, validation of exit questionnaires would be required.

The benefits of this programme were similar to those seen following a more elaborate, couple-based mind–body intervention (Lemmens et al., 2004). In that setting, a series of six 2-h group sessions was lead monthly by three health professionals: a mind–body counsellor, a family therapist and a treatment coordinator. Drawing, relaxation and meditation were used. This intervention resulted in subjective improvements in understanding and well-being.

Another mind–body programme for subfertile women, utilising cognitive-behavioural therapy (CBT) rather than art therapy, has been tested using viable pregnancy as the primary end-point, in a three-arm randomized controlled trial (Domar et al., 2000). In that study, 184 women were randomized to CBT, a standard support group or no intervention. The CBT group received relaxation training,
cognitive restructuring, methods of emotional expression and nutrition and exercise information. The traditional support group spent an hour ‘checking in’ on their progress and a further hour discussing a specific topic, such as the impact of subfertility on their lives. The control group received no structured support. Over the 12-month follow-up period, 55 and 54% of the cognitive-behavioural and standard support clients had conceived a viable pregnancy, compared with 20% of the control group. Importantly, 60% of the control group dropped out, mostly because of dissatisfaction with their allocation.

An earlier trial also evaluated the effect of counselling on pregnancy rate (Sarrel and DeCherney, 1985). There were 20 couples with unexplained infertility randomized either to a single interview with a psychologist (which explored psychosexual problems) or to no interview. After 18 months of follow-up, 6 of 10 women receiving counselling and 1 of 9 in the control group had conceived.

The current project was designed as a pilot study to develop and evaluate an art therapy programme for subfertile women. Further research is certainly required to validate its findings, but they do suggest that art therapy provides one more ‘non-pharmacological’ means of improving mood. This is especially relevant for subfertile woman, given the potential risks associated with antidepressant use (Louik et al., 2007). Although the study did not address clinical depression or drug use, any type of pharmacological treatment that could have even a slight negative impact on pregnancy may make a non-pharmacological approach such as art therapy appealing to patients.

The findings of the present study suggest that this simple intervention is worth evaluating further in a randomized trial, to determine whether it can improve the quality-of-life and perhaps live birth rate. The process of ‘creating’ in this context was generally described by participants as powerful, joyous, playful and satisfying. It significantly improved symptoms of anxiety and depressed mood. Art therapy is thus an inexpensive, safe and novel approach to consider in the support of subfertile patients.

Acknowledgements

The authors gratefully acknowledge the generous spirit of the women participating in this project, whose willingness and commitment taught us much about what it means to experience subfertility.

References