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Computer-assisted group therapy for the treatment of depression and anxiety in general practice

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ABSTRACT

Aims To (a) elucidate a model of group therapy for the treatment of depression and anxiety in a general practice population, and (b) explore the role of computers in the model.

Rationale To improve the quality of community mental healthcare through the provision of mental health services to general practice patients, the Adelaide North East Division of General Practice (ANEDGP) developed a new group intervention for anxiety and depression, incorporating the use of computers. A clear model of this intervention is required to aid in the evaluation and transfer of this emerging therapy.

Method Qualitative data were collected from mental health professionals ($n = 7$) and patients ($n = 8$) using participant observation, focus groups and one-to-one interviews. The data

were collected and analysed based on a grounded theory methodology.

Conclusions The model integrates focused psychological strategies and narrative therapy, utilising a diverse range of techniques and modalities. Individual computer-assisted modules are incorporated into the model. Mental health professionals and patients identified nine key benefits of computer use in group therapy. While the use of computers in therapy does not hold universal appeal for all patients, there is evidence to support it as an innovative and therapeutic adjunct to group therapy.

Keywords: anxiety, computer-assisted, depression, general practice, group therapy

Introduction

A study by the World Health Organization predicts that mental health will account for 15% of the disease burden worldwide by the year 2020.¹ Currently

mental illnesses, such as depression and anxiety, are a major contributor to the burden of disease in Australia and affect an estimated 20% of the adult

population.^{2,3} Approximately 62% of people with a mental illness receive no assistance at all, or depend on informal support.² Of the 38% of people who do seek professional help, the majority (75%) consult their general practitioner (GP).² However, GPs do not always have the time, skills or interest to deliver specialised mental health services.⁴⁻⁶

The Australian Federal Government's Better Outcomes in Mental Health Care (BOMHC) initiative aims to improve the quality of mental healthcare in the community by providing better GP education and training, and greater GP access to mental health professionals and services.⁷ The initiative consists of five components focused on continuity of care and quality mental health outcomes. One of these components is 'Access to allied health services' which enables GPs to provide their patients with referral to psychological services.⁷

As part of the BOMHC initiative, the Adelaide North East Division of General Practice (ANEDGP) was funded to provide psychological health services for general practice patients. BOMHC guidelines require that the service is time limited and delivered using focused psychological strategies (FPS).⁷ FPS are treatment strategies derived from evidence-based psychological therapies. Strategies included under the FPS label are highlighted in Box 1.⁸ These strategies are delivered in up to six sessions, with an

option for up to a further six sessions following a review by the referring GP.

The ANEDGP Group Therapy Program was formulated by a GP and a clinical psychologist with over 30 years of combined clinical experience. The programme was developed based on clinical experience, and draws together a number of psychological approaches and techniques. The service provided by ANEDGP is delivered using a group format and is tailored for patients with symptoms of anxiety or depression. Research evidence indicates that for the treatment of depression and anxiety, group and individual therapy formats are comparable in effectiveness, and both are superior to no treatment.⁹⁻¹² Choice of therapy format is largely dependent on client preferences and clinical judgment.

An innovative component of the ANEDGP treatment programme is the incorporation of a computer-assisted module as an adjunct to group therapy. A review of the literature on computer-assisted therapy indicates this is an underdeveloped but rapidly expanding area of research. While there are a growing number of studies focused on outcome research addressing the efficacy of computers in individual therapy,¹³⁻²⁷ a review of the literature identified only four studies on the use of computers in a group format.²⁸⁻³¹ These studies offer tentative support for the use of computers as an innovative and effective adjunct to group therapy.

Similar to most psychological treatments, computer-assisted therapy appears to benefit some patients but not all. Factors such as disease severity, co-morbidity, motivation, literacy level, learning style, social and cultural values can impact on uptake and effectiveness of computer-assisted therapy.¹⁷ The advantages of computer-assisted therapy include:^{13,17,21,30}

- *privacy*: some users may feel more comfortable disclosing information to a computer than to a person
- *reliability*: the programme information remains the same across repeated presentations. Computers are immune to fatigue, illness, boredom or other similar human traits
- *flexibility*: the user can work at their own pace and in their own time. Sessions can be repeated and responses can be stored for future reference
- *empowerment*: computer-based therapy encourages users to take an active role in their therapy. They do not have to rely on the therapist for direction. Patients may feel in control because they are helping themselves
- *variety*: computers provide a different format of delivery, catering to differing personal preferences, skills and learning styles of patients and practitioners

Box 1 Abbreviated version of the Medicare Benefits Schedule item descriptor for focused psychological strategies

- 1 Psycho-education
- 2 Cognitive-behavioural therapy, including:
 - behavioural interventions: behaviour modification; exposure
 - techniques; and activity scheduling
 - cognitive interventions: cognitive analyses, challenging and
 - restructuring; self-instructional training; and attention regulation
- 3 Relaxation strategies, including:
 - progressive muscle relaxation
 - controlled breathing
- 4 Skills training, including:
 - problem-solving skills training
 - anger management
 - social skills training
 - communication training
 - stress management
- 5 Interpersonal therapy

- *accessibility*: potentially, computer-assisted therapy is accessible to a greater number of people, at a reasonable cost, compared to traditional therapy. Access is possible from a variety of locations
- *therapist support*: it creates therapist time for other tasks, or for patients that are not suited to computer-assisted therapy. It is also an efficient form of data collection and analysis.

Based on clinical experience, the co-developers of the ANEDGP programme identified that computers could be an effective and innovative adjunct to group therapy. They combined focused psychological strategies in a group format with a computer-assisted module, to treat general practice patients with anxiety and depression. The ANEDGP Group Therapy Program underwent a pilot phase from October to December 2003 and full implementation from February 2004.

While it is good clinical practice to evaluate all therapy, it is especially important when adopting a new or modified therapeutic approach. It is possible to evaluate any therapy, however it is arguably easier to do so when the characteristics and procedures are clearly and specifically prescribed.¹¹ To establish efficacy of the ANEDGP Group Therapy Program it is first necessary to establish a clear description, or model, of the therapy being evaluated. A model is defined as a 'schematic description of a system, theory, or phenomenon that accounts for its known or inferred properties and may be used for further study of its characteristics'.³²

Establishing a model of therapy not only makes evaluation of its processes and outcomes possible, but also facilitates the transfer of the therapy to other therapists and settings. It may also serve to consolidate an emerging therapy, so that there is consensus about what are the key therapeutic components and how the treatment is best delivered. Thus, this study aims to (a) elucidate a model of ANEDGP group therapy and (b) explore the role of computers in the model.

Methods

To cater for the emerging nature of the treatment intervention, and because the research is largely exploratory, it was important to find a research methodology that matched these characteristics. Grounded theory is an analytical inductive approach, allowing the researcher to go from observed instances to the development of a law or model of action.^{33,34} This theory is 'grounded' in data obtained during the study, particularly in the actions, interactions and processes of the people involved. Hence

when doing data analysis, the researcher operates with a sense of reflexivity. The strength of grounded theory is that it makes no assumptions about what the researchers expect to find. Throughout the analysis, theory is built through interaction with the data, making comparisons and asking questions of the data until data saturation is reached.

Participants

A total of 15 people participated in this study, including general practice patients and mental health professionals (MHPs). A focus group series was conducted with the MHPs ($n = 7$), and individual semi-structured interviews were conducted with the general practice patients ($n = 8$). Participant observation of MHPs and patients was conducted through attendance at the ANEDGP two days per week for six months, including observation of therapy groups ($n = 4$).³⁴ The University of Adelaide provided ethics approval for the study.

To be included in the study patients needed to be over 18 years old and identified by their GP as having a current or past period of depression and/or anxiety. They also needed to be referred by their GP for group therapy at ANEDGP and have attended at least five of the six group therapy sessions. Individual patient characteristics are presented in Table 1.

MHPs were included in the study if they were a qualified or trainee mental health professional and involved in the development and/or delivery of the ANEDGP group therapy programme. Individual characteristics are presented in Table 2.

Participant observation

The researcher, a master of psychology student at the University of Adelaide, was on placement at ANEDGP two days per week for a six-month period. The researcher was uniquely situated to act as a participant observer of both the development and delivery of the group therapy programme.³⁴ The researcher was privy to formal and informal discussions about the programme, as well as all the written documentation relating to the set-up and delivery. The researcher participated as a co-therapist in four group therapy sessions, under the supervision and leadership of a more experienced therapist. This was the researcher's first experience of group therapy. Throughout the six-month period, the researcher kept a diary, including memos and observations of the group therapy program.

Focus groups

The MHPs involved in the development and/or delivery of the programme were provided written

Table 1 Patient characteristics

Patient name (not actual name)	Sex	Age (years)	Therapy group	Receiving government benefit	Education completed	Previous specialist mental healthcare	DASS (depression)	DASS (anxiety)	DASS (stress)
David	Male	42	Anxiety (a)	Yes	Tertiary	No	Mild	Mild	Moderate
Cara	Female	36	Anxiety (b)	No	Year 12	Yes	Normal	Normal	Moderate
Fran	Female	38	Anxiety (b)	Yes	Year 12	Yes	Normal	Normal	Normal
Grace	Female	19	Anxiety (c)	No	Year 12	Yes	Extreme	Extreme	Extreme
Ada	Female	62	Depression (a)	No	Year 10	Yes	Severe	Extreme	Extreme
Betty	Female	41	Depression (a)	Yes	Year 10	Yes	Severe	Extreme	Extreme
Elle	Female	34	Depression (b)	Yes	Year 12	Yes	Severe	Severe	Moderate
Holly	Female	39	Depression (c)	No	Tertiary	Yes	Extreme	Severe	Mild

The DASS (Depression Anxiety Stress Scale) was administered at the start of group therapy. This is a 42-item self-report scale. Numerical scores are derived for the three subscales, and fall into the following ordinal scale categories: normal, mild, moderate, severe or extreme

Table 2 Mental health professional characteristics and role

Profession	Sex	Professional experience (years)	Role in development and delivery of ANEDGP group therapy programme
GP and occupational therapist	Female	17	Identified the initial concept and developed the group therapy programme. Group co-therapist for first three months of the programme. Provides ongoing consultancy support
Clinical psychologist	Female	15	Co-developer of the group therapy programme. Group co-therapist since start of the programme. Ongoing responsibility for clinical component of the programme
Occupational therapist	Female	10	Group co-therapist (recruited after programme pilot phase). Ongoing responsibility for administrative component of the programme
Mental health nurse	Female	15	Group co-therapist since start of the programme
Clinical psychology trainee*	Female	0.5	Group co-therapist (three groups) for first five months of the programme
Clinical psychology trainee*	Female	0.5	Group co-therapist (two groups) for three months following the pilot phase
Clinical psychology trainee*	Female	0.5	Group co-therapist (two groups) for three months following the pilot phase

* Master of psychology (clinical) student, on placement from the University of Adelaide, South Australia

(i.e. information and consent form) and verbal information about the study. A series of three focus groups were conducted, with written invitations provided for the initial focus group, and verbal invitations for subsequent focus groups. MHPs ($n = 7$) agreed to participate and signed an informed consent form prior to or at the first focus group. The first focus group lasted for approximately two hours and used a semi-structured format. The researcher acted as facilitator, and the session was tape recorded, transcribed and analysed. The questions for the first focus group were based on data gathered through participant observation.

The second and third focus groups were conducted at six weeks and eight weeks after the first focus group. Their primary purpose was to clarify and validate the information provided in the previous focus group(s). Based on data from the first focus group and participant observation, a document describing a draft model of the group therapy programme was produced. This document was used to guide the discussion of the second focus group. Prior

to the third focus group, the document was refined and the validation process repeated. The researcher acted as facilitator and scribe for these later groups; they were not tape-recorded.

Interviews

One-to-one, semi-structured interviews with general practice patients were conducted at the ANEDGP office. Patients were recruited from the seven therapy groups conducted during the research period. During each group's final session, patients were given verbal and written information (i.e. information and consent form) about the research project. They were then asked to place their name on a list if they were interested in being contacted to participate in the study. A purposive sampling approach was adopted, whereby the researcher uses special knowledge or expertise about a specific group to select subjects who represent this population.³⁴ The patients were contacted, based on criteria of interviewing a range

of ages, sexes, and patients from different therapy groups, while taking into consideration the MHPs' recommendations of patients most able to make a meaningful contribution. The researcher contacted patients by telephone over a three-week period.

Of the 12 patients on the list, ten were contacted by the researcher. One of the ten declined to participate because it was no longer convenient for them, and another was excluded because they did not meet the criteria of attending at least five group therapy sessions. During this initial telephone contact an appointment was made to collect written consent and to conduct the interview. Participants were contacted the day before, or on the day of the interview to confirm their attendance. The interviews ($n=8$) were semi-structured and lasted from 25 to 60 minutes. Questions were based on information gathered from participant observation and the first MHP focus group.

Data analysis

The aim of grounded theory analysis is to generate a theory to explain what is central in the data. The task is to find a central core category that is both at a high level of abstraction and grounded in the data. The three steps involved in conducting a grounded theory analysis are to (a) identify conceptual categories in the data; (b) find relationships between these categories; and (c) conceptualise and account for these relationships through finding core categories. This is achieved by carrying out three kinds of coding (a) open coding to find the categories; (b) axial coding to interconnect them; and (c) selective coding to establish the core category or categories.³⁴

The text from the first focus group was transcribed from tape and inspected on a sentence-by-sentence basis. This resulted in the generation of a number of categories. These categories were manually inspected and cross-referenced, until core categories began to emerge. The core categories were derived from the words closely resembling, or used by, participants, in an attempt to maintain the semantics of the data. From these core categories a model was established. Data collected from the second and third focus group and participant observation, were used to clarify, expand and validate core categories and the model as a whole.

Data from the focus groups and participant observation were used to formulate the patient interview questions. After each interview the data were transcribed and analysed in the same way as the focus group data. These data were used to shape subsequent interviews, until there were no new categories or themes emerging from the data. In practice the steps of analysis were not strictly sequential. Rather,

it was an iterative process, involving a constant comparison of data, codes, categories and the whole model.

Results

The results from this study are presented in two stages. The first stage describes a model of ANEDGP group therapy. The second stage presents data exploring one part of the model, namely the role of computers in group therapy.

The model

Based on participant observation and the MHP focus groups, a model of therapy was established. An overview of the ANEDGP group therapy model is presented in Figure 1. The six key components of the model are labelled (a) therapeutic approach, (b) group structure, (c) therapist and client, (d) environment, (e) self-help and (f) orientation, working and termination. A description of each of these components follows.

Therapeutic approach

The therapeutic approach influenced all aspects of ANEDGP group therapy, as indicated in Figure 1. The therapeutic approach adopted combined a number of overlapping psychological strategies and principles, including psycho-education, cognitive-behavioural therapy, relaxation strategies, skill training and narrative therapy. This approach assumed that the client has some level of insight and is motivated and capable of change.

Psycho-education involved the provision of verbal and written information on topics such as the 'signs and symptoms of depression', and the 'fight or flight response'. Delivery was both by therapist-led instruction and guided sharing of information among group members. By providing structure and explanation, psycho-education can relieve uncertainty, provide insight and meaning, and help people to make alternate interpretations or use new strategies to deal with problems.

Cognitive-behavioural therapy was used to teach group members techniques they could apply to help facilitate change in their thoughts and subsequent behaviour. Particular cognitive interventions used included cognitive analyses, challenging and restructuring via thought diaries, ABC model and downward arrow techniques. Behavioural techniques included activity scheduling and exposure.

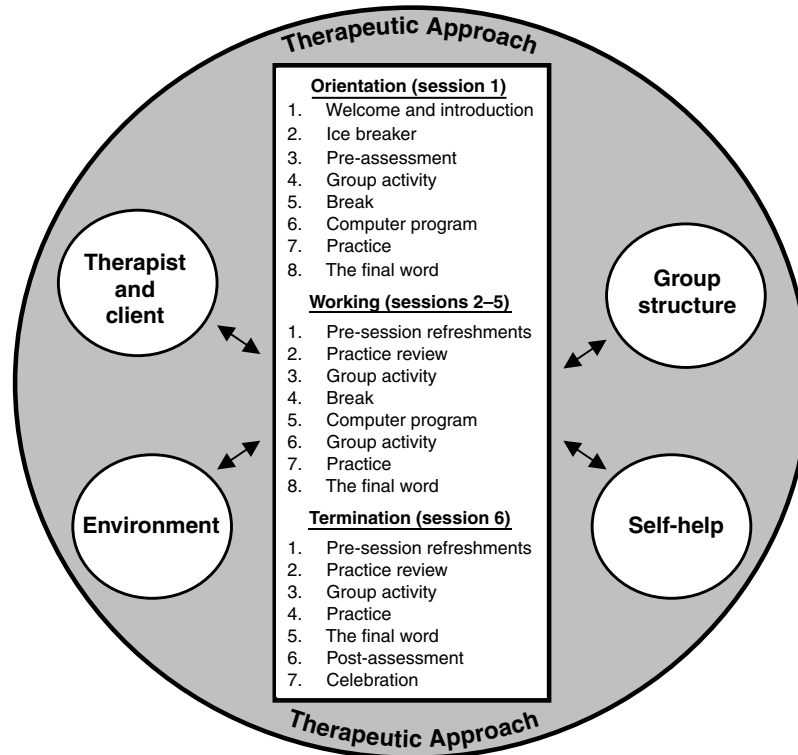


Figure 1 Model of ANEDGP group therapy

Relaxation was an important theme, emphasised through creating an environment conducive to relaxation (e.g. therapist style and venue décor) and practising relaxation strategies in the group and at home (e.g. breathing techniques, progressive muscle relaxation and visualisation).

Skills training was emphasised through the therapists modelling particular behaviours and also teaching specific skills (e.g. goal setting, problem solving, assertiveness and social skills).

The key ideas of narrative therapy that influenced the model included:³⁵

- people give meaning to their lives by creating a dominant narrative, or story, linking their experiences
- therapists adopt a respectful, non-blaming approach that views problems as separate from people
- clients are viewed as experts in their own lives and have skills, competencies, beliefs, values and abilities that will assist them to change their relationship with problems in their lives
- clients play a role in determining the direction taken in therapy
- the ways in which we understand our lives are influenced by the broader stories of the culture in which we live.

These principles are reflected in the therapist attitude, style of delivery and a number of activities (e.g. using language that externalises the problem;

identifying group goals; the final word; end of therapy celebration).

Group structure

The key structural characteristics of the group, including duration, type and size, are highlighted in Box 2.

Therapist and client

This component of the model describes how the MHPs view the client–therapist relationship, the key attributes of an effective therapist and the benefits of co-facilitators in therapy. The relationship between client and therapist was described as being collaborative, empowering, compassionate, respectful and encouraging. At times the therapist needed to be directive, in order to keep the group focused on the goals of therapy. The client is viewed as a self-expert, with his or her own knowledge, experiences and resources. They were also viewed as being committed to learning and developing their knowledge and skills.

The MHPs said that for the therapist to be effective they needed to have a thorough understanding of the therapeutic approach. They needed to be able to facilitate a safe, relaxed, learning environment and stay focused on group goals. They should have excellent small group management and verbal

Box 2 Description of group structure characteristics

- *Purpose:* to reduce symptoms of depression and/or anxiety
- *Groups offered:* two different groups are offered to patients, namely:
 - overcoming depression
 - overcoming anxiety (with a focus on 'anxiety and stress' or 'anxiety and panic')
- *Clients:* general practice patients aged 16+ years
- *Referral:* patients were referred by their GP. GPs are required to have completed the mental health skills training and be registered with the Health Insurance Commission (HIC).
- *Duration:* two hours per week for six weeks
- *Type:* closed group (no new patients after session two)
- *Size:* four to ten patients
- *Therapist:* two therapists co-facilitate the sessions

presentation skills. The therapist should also be able to work within the predetermined structure of the group, while maintaining some flexibility and be able to respond to group needs. The MHPs identified that the more group therapy experience they had, the more flexible and responsive they were able to be to group needs.

Group therapists were drawn from a multidisciplinary team of general practitioner, psychologist, mental health nurse, occupational therapist and trainee psychologists. The same two therapists facilitated each group for all six sessions, with one therapist taking the lead and the other providing support and feedback. The therapists shared leadership of the group, swapping the lead within a session or between sessions. The MHPs believed the benefits of having two therapist included added expertise and experience; shared therapist workload; better attention, observation and feedback given to clients; increased opportunity to build therapist–client rapport; reduced therapist fatigue; and professional development for therapists.

Environment

The environment refers to the physical environment where group therapy was held. The venue for group therapy was the ANEDGP office, a non-clinical venue situated next to the main Modbury Hospital building. Sessions were held in a computer suite

with ten computers, a printer, an electronic white board and tea/coffee-making facilities. Group members were seated on chairs in either a circular group format or at individual computers, depending on the activity. Based on client feedback, floor mats were introduced for use during the session on relaxation. Screen savers on the computers were found to be distracting, so were turned off. An external view to hills and gum trees, scenic posters on the walls and potted plants helped create a relaxed atmosphere.

Self-help

Empowering individuals to help themselves is an underlying principle of the model. In particular, group therapy incorporated a number of self-help mediums, aimed at providing patients with the knowledge and skills necessary to self-manage their problems. These included a generic resource library, located in the therapy room, of pamphlets, books, videotapes, audiotapes and CDs. Group members were encouraged to view and borrow resources from the library. They were also provided with session-related handouts each week and individual folders to store them in; this provided a solid resource for use during and after group therapy.

Another self-help medium was the use of computers in-session to deliver psycho-education and cognitive-behavioural strategies (Box 3). The computer modules lasted 15–30 minutes per session and were completed over 4–5 sessions. In a collaborative venture with Monash University and University of New South Wales, two different software packages were used, CLIMATE (for depression) and Panic Online (for anxiety). Both programs were designed for use in individual therapy.

CLIMATE (Clinical Management and Treatment Education) was developed by the University of New South Wales at St Vincent's Hospital (www.climate.tv). It is a computerised clinician's assistant (i.e. originally intended for use by GPs) designed to help patients manage their own chronic disorder. It guides clients through a cartoon-based recovery story, sets homework tasks and measures progress. Clients may choose from one of five recovery stories, which differ based on sex, age and relationship status.

Panic Online was developed by Monash University (www.med.monash.edu.au/mentalhealth). It is an interactive step-by-step treatment program delivered via the internet. It provides text-based psycho-education, web-administered questionnaires and cognitive-behavioural treatment for people experiencing panic and anxiety. Depending on the focus of the group (i.e. anxiety with or without panic

Box 3 Description of therapy session activities

Welcome and introduction: group members are welcomed and introduced to the therapists and each other. They are provided general information about the venue, group format and therapy.

Pre-session refreshments and breaks: on arrival, participants are encouraged to help themselves to refreshments (e.g. drinks and biscuits). Mid-session a break of approximately ten minutes allows participants to have refreshments, socialise, ask individual questions of facilitators, go to the toilet, have a cigarette.

Icebreaker: this is a group activity designed to promote group cohesion in a non-threatening, fun and interactive way (e.g. group members are placed in pairs to discuss a topic assigned by the facilitator; pairs are rotated until all group members have met).

Guidelines and goals: this is a group activity designed to establish guidelines for how the group will operate and to establish shared goals for therapy. Participants brainstorm relevant ideas and they are recorded on a white board. A copy of the group guidelines and goals is distributed to all group members. The goals help determine the group programme content (see group activity).

Group activity: group activities are a key feature of this programme and are delivered in 20–40-minute, practical, interactive segments. They include psycho-education (e.g. fight–flight response), cognitive-behavioural therapy (e.g. cognitive restructuring and behavioural activation), relaxation strategies (e.g. progressive muscle relaxation), skill training (e.g. goal setting, problem solving, assertiveness and social support).

The activities that remained consistent across all groups were cognitive analyses, challenging and restructuring; and relaxation strategies. The psycho-education, behavioural interventions and skill training varied depending on the focus of the group (i.e. depression or anxiety) and the goals identified by clients in the first group session (see Guideline and goals).

Computer module: group members spend 10–20 minutes per session individually working through a self-directed, computer-assisted, cognitive-behavioural therapy-based psycho-education module. Following this there is a five to ten minute group discussion about the module.

Practice and practice review: each week a practice task, to be completed prior to the next group meeting, is assigned based on the knowledge and skills learnt in the session. At the start of the next session there is a group discussion reviewing progress, success and difficulties completing the practice task.

Final word: at the end of each session group members are asked to give a word or short sentence that reflects their thoughts or feelings about the therapy session.

Pre- and post-assessment: pre-assessment includes client completion of demographic information, consent form and clinical questionnaires (e.g. DASS, WHO-QOL). Post-assessment includes client completion of a programme evaluation form and a repeat of the clinical questionnaires.

Celebration: at the final group session, rather than having the usual mid-session break, 30 minutes is reserved at the end for a celebration. Clients are invited to bring something to eat and share food and drink with other group members. They are presented with a certificate to mark their progress and achievement. This ends the group in a positive, social way.

attacks) either the ‘panic’ or ‘stress’ modules were used.

Orientation, working and termination

The group consisted of six weekly sessions, divided into three distinct phases: orientation (session 1); working (sessions 2–5); and termination (session 6). An overview of the activities for each phase is provided in Figure 1, and a description of each of

these activities is provided in Box 2. The orientation phase served as an introduction to group therapy; provided basic venue and group related information; began to establish a safe and supportive environment; helped build group cohesion, identified group goals; and gathered baseline data.

The *working phase* of therapy included sessions 2 to 5. The bulk of the psycho-education, cognitive-behavioural therapy, relaxation strategies and skill training were introduced during this phase. Attention

was placed on consolidating group cohesion and facilitating a safe, supportive, learning environment.

The *termination phase*, session 6, focused on consolidating the knowledge and skills learnt in previous sessions, as well as recognising previously established client resources. Clients were helped to plan their next steps; client data were collected; and finally handing out of certificates and a celebration (i.e. refreshments and social get together) signalled the end of therapy.

Computers in therapy

The second stage of this study draws on data collected from the MHP focus groups and individual interviews with group members to explore the role of computers in group therapy.

Mental health practitioners

The incorporation of the computer module was viewed by MHPs as a useful and innovative adjunct to group therapy with a number of benefits. From the data, nine key themes emerged and are summarised as follows:

- *information*: the computer modules provide relevant information, strategies and issues. Information is consistent and easy to understand and introduces some people to a new source of information (e.g. websites)
- *confidence*: for people who are unsure about what to expect in group therapy, the familiarity and practicality of computers can help them feel more confident
- *focus*: the computer module can help to re-focus and engage group members, particularly if group discussion has digressed
- *mastery*: basic computing skills are required, so people can quickly master a new skill or easily demonstrate previously acquired computing skills
- *personal space*: the computer module is one-on-one time with the computer and so provides a break from the intensity of group work
- *time to reflect*: working on the computer modules provides individual time to reflect, for both the group members and therapists
- *diversity*: computers offer an alternative learning modality, which in conjunction with the range of other strategies and modalities offered in the group, can help to reinforce learning. Like other components of the model, the computer modules are an effective or appealing medium for some, but not all, group members

- *empowerment*: using a computer empowers people to direct their own learning and development
- *therapist support*: doing individual, self-directed work on the computers provides an opportunity for therapists to individually consult and support group members. This can help to deal with individual issues and build rapport.

Group members

Four of the eight group members interviewed said that the computer modules were a beneficial part of group therapy. One interviewee said they did not find it of any benefit and three were indifferent. Group members' explanations as to why they found the computer modules beneficial fell into seven main categories:

- *information*: there was consensus amongst seven group members that the computer modules provided them with useful information and strategies for understanding and dealing with depression or anxiety
- *confidence*: seeing the computers in the therapy room gave some interviewees a sense of confidence because it was familiar to them, even though other aspects of group therapy were not:

Elle: I didn't know what to expect from the group but the computers in the room gave me a bit more confidence because I thought 'I can do that'

- *focus*: switching from a group format to an individual format helped with focus and concentration:

Betty: Going from talking in a group to getting up and moving to the computer, I think helped everyone keep concentrating on what was happening, rather than just sitting, listening and talking, when you can sort of vague out or whatever

- *mastery*: completing the computer modules provided some interviewees with a sense of mastery because they could operate the computer and understand the information presented to them:

Grace: It was cartoon and easy to understand and I felt good because I could do it

- *personal space*: the computer module provided group members with some personal space, a comfortable place away from the intensity of group work, where they could work at their own pace:

Elle: I felt comfortable one-on-one with the computer, headphones on and in your own space. It provides a break from the group, gave you your own little space. Just sitting at the computer and working through it slowly, at my own pace

- *time to reflect*: the computer modules provided individual time to reflect and identify the relevant issues and information:

Cara: The computer session was good because it was quiet time for us to sit and reflect a little bit, to think about what is relevant, get some more information and have time away from the group setting

- *diversity*: the last category, diversity, applies to all group therapy activities, not just the computer modules. Group members recognised that a beneficial component of group therapy was the diversity of therapeutic strategies and modalities offered. Different activities or modalities appealed to different people, as summarised by Holly:

Holly: The diversity in the group and diversity of the activities was really good. The things that I didn't find useful in the group were probably useful for other people.

The three interviewees who were indifferent about the computer modules said that while they may have been useful, they preferred other activities or modalities. One interviewee felt she could have completed the computer module in her own time:

David: It wasn't that I didn't find [the computer module] useful, it was just I found the other stuff better, like breathing exercises or learning coping strategies.

Holly: The stories were lovely but it is probably something I could have done in my own time.

The interviewee that did not find the computer modules useful said:

Ada: I'm not very good with computers and the cartoon-story didn't relate to me really. Also it was written to be done with your doctor, but we weren't doing it like that. It just didn't seem very useful for me.

Discussion

The first aim of this study was to elucidate a model of ANEDGP group therapy. The second aim was to explore the role of computers in the model. Both of these aims were achieved in the context of a small-scale, exploratory study. To improve the validity of the research, triangulation of data collection (i.e. participant observation, individual interviews and focus groups) and participants (i.e. MHPs and group members) occurred. Respondent validation, or taking

the findings back to the subjects being studied, enabled the subjects to comment on and verify the findings. This occurred through MHP feedback in the second and third focus group; and by seeking individual feedback from two MHPs, the GP and psychologist, on the final draft of this research article.

The model

ANEDGP Group Therapy consisted of six two-hour weekly group therapy sessions. A closed group format was adopted, with five to ten general practice patients and two therapists from a multidisciplinary team. The ANEDGP group therapy model is eclectic, drawing on a range of empirically supported psychological principles and techniques. The six key components of the model are labelled (a) therapeutic approach, (b) group structure, (c) therapist and client, (d) environment, (e) self-help and (f) orientation, working and termination. The six components of the model are interlinked and often overlap, in particular the therapeutic approach influences all other components of the model. The therapeutic approach combines evidence-based focused psychological strategies and narrative therapy.

Computers in therapy

Nine categories addressing the role of computers in therapy emerged from the data. Seven of these categories were consistent across the MHPs and group members. Two additional categories were identified by MHPs (i.e. therapist support, empowerment). Four of the categories (i.e. information, empowerment, diversity, therapist support) overlap with themes identified by previous research.^{13,17,21,30} Three categories identified in previous research were not identified in this study (i.e. accessibility, privacy, flexibility) and four additional categories were identified in this study (i.e. confidence, focus, mastery, personal space).

The difference in the overlap of categories between research studies is best explained by the therapy delivery format. Previous research has looked at the role and benefits of computers in an individual format, however this research was addressing the use of computers in a group format. In a group format, issues of accessibility, privacy and flexibility are not particularly relevant. However, confidence, focus and personal space are perhaps more relevant to a group format than individual format. The final category, mastery, is relevant in this study because of the basic level of computer skills required to operate these particular computer software packages, and the high

level of support provided by therapists to less computer literate group members. In summary, computers have a unique beneficial role in group therapy.

Diversity

A key theme emerging from the data for the model as a whole, and computers in particular, was that of diversity. The model is eclectic, offering a range of different techniques using a variety of modalities. Previous research has identified that factors such as disease severity, co-morbidity, motivation, literacy level, learning style and social and cultural values can impact on uptake and effectiveness of techniques and modalities offered in therapy.^{17,22} In addition, short-term group therapy, such as that offered by ANEDGP, is likely to be just one part of the recovery process for the majority of people. This fits with the stepped care model, which recognises that people respond differently to varying types of interventions, so offers people a range of therapeutic options.²²

The computer modules add to the diversity of the ANEDGP group therapy model. As seen from the data, four interviewees claim that they found the computer benefited them, three were indifferent, and one said it was of no help to them. The idea that computer-assisted therapy is not universally appealing or beneficial is supported by previous research.^{17,22}

Conclusions

The findings of this study are limited by it being an exploratory study with a small sample size. However, the data have served to elucidate a model of ANEDGP group therapy that can be used for further evaluation of the processes and outcomes of therapy. It can also be used to facilitate the transfer of ANEDGP group therapy to other therapists and settings, in particular other divisions of general practice.

Computers added to the diversity of the model, alongside a range of other techniques and modalities. MHPs and group members reported a range of benefits from using computers in therapy, some of which are unique to the group format. However, computer-assisted therapy is not universally appealing or beneficial for all group members. Overall, the use of computers is an innovative and useful adjunct to group therapy that deserves further research attention.

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CONFLICTS OF INTEREST

None.

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