EFFECTS OF COVERT PRACTICE OF MODELING AND OF ASSERTIVENESS ON GROUP FLOODING IN VIVO IN THE TREATMENT OF AGORAPHOBIA

by

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ABSTRACT

This study investigated whether the addition of covert modeling with an assertive model (CM) and of covert assertiveness (CA) would augment the effects of prolonged group exposure in vivo in the treatment of agoraphobia.

Thirty-two agoraphobic subjects were divided into three groups. One group (FL/A) received exposure augmented with CM and CA; the second group (FL) received similar exposure with placebo imagery; and the third group served as waiting-list controls. Therapy was brief, time-limited, and intensive. Each group of about five members met for three sessions evenly spaced over five days with each five-hour session including about 2-1/2 hours of in vivo exposure. Both treatment groups were encouraged to use self-paced, home-based exposure practice.

Subjective self-report measures, a behavioural diary, and assessment of social performance by a significant other were used to evaluate outcome. A one month follow-up was done.

Both treated groups made significant gains compared to controls at posttreatment and at follow-up. Subjective measures of anxiety and avoidance showed stronger effects than behavioural results. Marginal differences were found between treated groups with the FL/A group improving on the FL group with more total time spent away from home (and in particular when unaccompanied), and with decreased anxiety during

exposure sessions.

Group exposure in vivo is recommended as an efficient and effective therapy for agoraphobia.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

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INTRODUCTION

Agoraphobia has been described as a debilitating disorder which affects many aspects of social, marital and career functioning. It can be ameliorated in many cases by behaviour therapy (Mathews, Gelder, & Johnston, 1981). Prolonged in vivo exposure has been reported to be the treatment of choice (Mavissakalian & Barlow, 1981).

This study attempted to respond to the demands dictated by practical aspects of delivery of service with a treatment programme which integrated knowledge gained from research. It was desirable for therapy to be short-term to bring rapid relief. Therapy should be time-efficient for therapists because of the large numbers of agoraphobics requiring treatment. This would suggest an agency-based (rather than a home-based) programme where possible. Exposure should cover as wide a range of situations as possible and therapy techniques should be amenable to group application.

Descriptive Characteristics of Agoraphobia

The diagnostic label "agoraphobia" was chosen by Westphal and derives from the Greek "agora" meaning "the market place," (Westphal, 1871). Current usage not only refers to the fear of open spaces but also reflects the fear of being in situations of public assembly. However, the main features of agoraphobia have been unchanged since Westphal's description: fears of going out into the open; into streets, shops and crowds; into

closed spaces (such as elevators, theatres and cinemas); of travel on public transport or travelling alone; of being alone at home or of leaving home alone (Marks, 1969). The DSM III (1980) described an agoraphobic as one who has marked fear of (and thus avoids) being alone or being in public places from which escape might be difficult, or help not available, in case of sudden incapacitation.

In a survey of 1,200 agoraphobics in Britain, three major symptom clusters were found (Marks & Herst, 1970):

1. Non-phobic symptoms: exhaustion, giddiness, fear of fainting, headache, shaking, palpitations, tension, depersonalization, obsessions and panic.

2. Phobic symptoms: fear of travelling on trains and buses; of crowds, shops and tunnels; of going to theatres and hairdressers; and of riding in elevators.

3. Social timidity.

Factor analysis of data collected from phobic outpatients by Hallam & Hafner (1978) identified a distinct cluster of fears of public places, of shopping, and of travel which was present for agoraphobics but not in a group of miscellaneous phobics. Agoraphobics also tended to be more fearful and depressed than other phobics and to score more highly on a general symptom cluster of items that included breathing difficulties and dizziness. It was found that the agoraphobic cluster was not reducible to a different subset of fears or to a general trait of fearfulness.

Arrindell (1980), reported on a factor-analysis of responses to the Fear Survey Schedule from a large sample (N=703) of non-institutionalized phobics, and confirmed Hallam & Hafner's (1978) findings of the specificity of the agoraphobic cluster.

It has been reported that the clinical features of agoraphobia are similar in Europe, America and Australia (Roth, Garside, & Gurney, 1965). Marks (1967) found that an agoraphobic factor, suggested by analysing replies to a phobic questionnaire, coincided well with independent clinical diagnoses. Thus, there has been considerable evidence to support the position that there is a distinct and reliable set of descriptors which identifies the agoraphobic syndrome.

The prevalence of agoraphobia in America has been estimated variously as 6 per 1000 population (Agras, Sylvester, & Oliveau, 1969) and 5 per 1000 population (DSM III, 1980). In England, it was reported that about 60% of all phobics seen at the Maudsley Hospital in London were agoraphobics and therefore constituted the commonest phobia group. 75% of this agoraphobic group was female (Marks, 1969). In the Marks & Herst (1970) survey, 95% of the sample was female but they attribute this high proportion to selection bias resulting from their sample having been derived from members of a self-help club. The DSM III (1980) also notes the higher frequency of agoraphobia in women.

Agoraphobia has been characterized as a particularly debilitating disorder. Agoraphobics live with distorted social

relationships due to their incapacitating dependence on others (Andrews, 1966). Hallam & Hafner (1978) found in their factor analytic study, that social fears were particularly prominent for agoraphobics. This is likely to be associated with the limitations of their contracted social environment.

There has been some evidence that being agoraphobic was associated with cardiac dysfunction. Kantor, Zitrin & Zeldis (1980) reported that mitral value prolapse syndrome (MVPS) occured more frequently among female agoraphobics than in a female control group. Although they hypothesized that MVPS-induced palpitations lead to panic attacks and to the development of agoraphobia in psychologically susceptible individuals, they did not address the possibility that the repeated cardiac stress associated with agoraphobic-related anxiety might be the cause and not the result of MVPS.

TREATMENT

I. Flooding

Hafner & Marks (1976) contrasted group with individual exposure in vivo for agoraphobics. No significant differences on phobic avoidance emerged between those treated individually and those treated in groups. Emmelkamp and Emmelkamp-Benner (1975) similarly reported no differences between individual and group exposure. Hand, Lamontagne & Marks (1974) have compared the effects of prolonged group exposure in vivo in structured (S) and unstructured (U) groups. The S groups had many advantages. Whereas at termination of 1 week's intensive therapy (12 hours of group exposure in vivo) the S and U groups had made similar gains, at 3 and 6 month follow-up the S group continued to progress but the U group did not. Other advantages characterizing group treatment were: both S and U members indicated a preference for group as compared to individual therapy; good group spirit and friendly competition spurred members to try harder; spontaneous humour aided therapy; the social environment provided by the group promoted skill development and assertiveness. It was found that members of the S group felt less tendency to escape from the anxiety-provoking situations and were quicker to move up their hierarchy of difficult situations. A replication study by Teasdale, Walsh, Lancashire & Mathews (1977) employed only S groups but no U groups or controls. It was found that, while treated subjects improved an equivalent amount up to

posttreatment stage (when compared to the Hands et al S group), this level of anxiety and avoidance was maintained over 12 and 24 weeks. They did not continue to improve to at least three months as Hands et al had found.

When compared to systematic desensitization, a combination of imaginal and in vivo flooding was found to be a superior treatment for agoraphobia (Marks, Boulougouris, & Marset, 1971). This finding was not replicated by Gelder et al, (1973). While flooding therapy might, at face value, appear to be an unpleasant, even harrowing, experience, this study reported that in practice it is surprisingly acceptable to subjects, and in some cases preferable to systematic desensitization. The fact that a treatment is anxiety provoking does not necessarily make it unacceptable to subjects. Hand, Lamontagne & Marks (1974) report on the palliative effects that being a member of a structured group has on the flooding experience.

Emmelkamp (1974) compared the treatment of agoraphobics by flooding (F), self-observation (SO), and a combined flooding/self-observation procedure (F/SO), with a no-treatment control. In the SO condition subjects were to return from their excursions when they felt "undue anxiety." In the FL group subjects were exposed to 45 minutes of flooding imaginal and 45 minutes of flooding in vivo during each session. Emmelkamp found that all treatments led to significant improvements compared to the control group with no significant differences between the FL and SO groups. The F/SO

group had made superior gains over the FL and the SO group both at post-treatment and 3 month follow-up. He concluded that experiencing anxiety was not a prerequisite for successful treatment because the FL and SO groups differed on this dimension. However, the design is confounded since his SO subjects must have experienced some anxiety for an unspecified period of time in order to know when to return home. As this was not strictly operationally defined, subjects may have used different criteria for this critical level of anxiety.

In a cross-over design study with treatment groups similar to Emmelkamp (1974), Everaerd, Rijken, & Emmelkamp (1973) reached similar conclusions to Emmelkamp. However these were flawed by a similar problem; subjects in their "successive approximation" group were required to retreat from a difficult situation "as soon as they felt anxiety." Everaerd et al (1973) found no significant differences between the successive approximation and flooding groups in that both groups had significant improvement without clear superiority.

Particular components of flooding therapy for agoraphobia have been examined. Long-duration flooding sessions have been shown to be more effective than short-duration sessions (Stern & Marks, 1973). It was found that, using a combined in imagination/in vivo flooding treatment, long duration exposure of two hours had superior effects to sessions each consisting of four half-hour exposures broken by short rests. Studies using agoraphobics have found that in vivo flooding is superior to imaginal flooding (Emmelkamp & Wessels, 1975;

Watson, Mullett, & Pillay, 1973).

Foa, Jameson, Turner & Payne (1980) have shown that massed practice of 2 hour flooding in vivo sessions (10 daily sessions) is superior in reducing avoidant behaviour of agoraphobics compared to spaced practice (10 once-weekly sessions). This study had the limitations of a 7 day follow-up period, and of using insufficient measurement (only ratings of client avoidance and anxiety by an independent evaluator were reported).

In the behavioural treatment of phobias, anxiety is an important variable. It is generally accepted that anxiety is manifested in three largely independent modes: behavioural, subjective and physiological (Lang, 1969; Borkovec & O'Brien, 1976). The question has arisen as to which mode or modes should be considered as providing the signal for terminating flooding sessions when evidence on the responses of the three systems in flooding treatments indicates desynchrony (Marshall, Gauthier, & Gordon, 1979). Marshall et al (1979) suggested that termination criteria for each flooding session derived from the different systems might yield different therapeutic outcomes. Marks (1972) suggested that it might be necessary to continue flooding sessions beyond the point at which the subject no longer displayed manifestation of anxiety (whether behaviourally, physiologically, or subjectively). There has been no empirical evidence to date to support or refute this contention. Thus, while longer unbroken exposure seems preferable to shorter interrupted exposure, the optimal

duration of exposure and temporal patterning of exposure sessions have not been empirically specified to date.

II. Modeling & Covert Modeling

Modeling procedures have only relatively recently been adopted by behaviour therapy (Bandura, 1969). In considering the clinical applications of modeling theory and research, Rachman (1972) concludes that "the fear-reducing value of therapeutic modeling is regarded as convincingly demonstrated." While some some modeling treatments are relatively easily translated to a clinical setting (e.g. a model handling a snake for snake-phobics, or exposing himself or herself to water for water-phobics), agoraphobia has by its nature often not been suited to this type of live modeling. This is mainly because the situations evoking the agoraphobic response are not easily reconstructed in clinical settings. While therapeutic modeling usually has used live or filmed (symbolic) models, the modeling cues require symbolical coding by the observer (Bandura, 1977). The covert representational processes of these modeled behaviours have been proposed as subsequently guiding observer behaviour (Bandura, 1977). Thus, rather than referring to the form (or medium) by which a model conveys cues to an observer, observational learning refers primarily to the processes by which an observer encodes stimulus cues.

According to this analysis, in vivo or symbolic modeling presentation is not essential for salutary treatment effects

to be obtained because the stimulus cues are also available through covert modeling rehearsal. Cautela (1971, 1976) suggested that covert modeling, in which subjects imagine a model engaging in behaviours that they wish to develop, would be effective in reducing avoidant behaviour. The imagined model would perform various behaviours with particular consequences, depending on treatment objectives.

Cautela, Flannery & Hanley (1974) demonstrated that covert and overt modeling were equally effective in reducing avoidance behaviour in subjects fearful of rats. While there were no significant differences between covert and overt modeling groups on three behavioural and two subjective measures, the overt group was superior on one subjective measure. Both groups improved significantly on all measures compared to a control group. This indicates that covert modeling and overt modeling affect similar behavioural parameters.

This finding was not confirmed by Thase & Moss (1976) using snake-fearful college students. They found that, while both a participant modeling and a covert modeling group produced significant changes, the former group had greater gains. The participant modeling paradigm (Bandura, 1977) not only requires exposure to models but actual exposure to the feared situation as well. Nevertheless, the evidence regarding the relative efficacy of covert and overt modeling treatments for fear reduction has been equivocal. Both the Cautela et al (1974) and the Thase & Moss (1976) studies used analogue

populations and there have been no reports comparing these treatments with clinical subjects.

Manipulation of the parameters of imagery has been examined with the aim of finding the optimal combination of imaginal model characteristics. In general, the greater the similarity between in vivo models and their observers, the greater the impact of modeling effects (Rachman, 1972). Kazdin (1974a), treating snake-fearful student subjects with covert modeling (CM), found that there were greater gains in behaviour, affect, and attitude to snakes in the group using models similar in age and sex. Therefore the relative contribution of each of these attributes is not known.

Again working with snake-fearful college students, Kazdin (1974b) found no significant differences in treatment effects whether the models imagined in CM scenes were self-models (the observers themselves) or other-models. Thase & Moss (1976) confirmed this finding.

The relative effects of using a multiple-model image versus a single-model image in CM treatment of snake-fearful college students were investigated by Kazdin (1974c). He found that, while the CM treatment was invariably effective in reducing avoidance, anxiety, and arousal; the use of multiple models led to a greater decrease in avoidance than the use of single models. (Whether one or two snakes were used imaginally, however, had no differential effects). This effect of using multiple models was replicated in Kazdin's (1975) study using unassertive subjects.

Kazdin (1974a, b), treating snake-fearful college students with CM, reported that on behavioural, arousal, anxiety, and attitudinal measures, subjects using coping models improved more than those using mastery models. These effects were maintained at 3 week follow-up. This replicates and extends an earlier study using snake-fearful subjects (Kazdin, 1973). These CM studies have results consistent with Meichenbaum's (1971) research which used filmed presentation of models. Coping models were defined as those who initially showed anxiety similar to the anxious subject but eventually coped with the situation. Mastery models displayed no fear at any stage and showed complete confidence throughout the situation.

Kazdin (1975) provided a useful framework for conceptualizing the sequence of events occurring during a CM episode. He made distinctions among the "context" in which the model is imagined to act (e.g. for agoraphobia this might be at the door of crowded department store with the model feeling anxious), the "response" of the model to the context (continuing the example, the model might use a covert assertive statement); and then the "consequences" that followed the model's performance (the model entering the store and feeling relaxed and pleased with the success).

While most reports of imaginal flooding research provided too little detail about the procedure to determine unambiguously whether or not covert models were components of the treatment unwittingly, some descriptions indicate that CM

could have been present (albeit informally). For example, Mathews & Rezin (1977) used imaginal flooding with subjects who feared dental treatment by asking them to imagine an incompetent dentist injecting their tongues in error. One group received coping rehearsal and another did not. Subjects must have used either a self- or other-model imaginally, but the modeling effects were not discussed in the report. Emmelkamp & Wessels (1975) required a group of agoraphobics using imaginal flooding to picture such scenes as walking alone or sitting in a room full of people. All the scenes presented involved some degree of covert self-modeling. As can be seen from these examples imaginal flooding with scenes in which people are present must almost invariably involve either self- or other-modeling. Rachman (1972) draws attention to the commonalities between flooding and modeling methods.

In Kazdin's schema for CM referred to above, these imaginal flooding procedures usually stop at the "context" or "response" stages, but another factor to be considered would be how imagined consequences following performance by a covert model affected observer behaviour. Kazdin (1974d) found that when assertive behaviour by covert models was rewarded by favourable consequences, this treatment group tended to show greater increases in assertiveness at post-treatment and follow-up than for groups where assertive model behaviour was not present. Similar results were obtained (Kazdin, 1975) using multiple models: rewarding consequences led to enhancement of modeling effects. The consequences of modeled

behaviour have been referred to by Hayes (1976) in his dual component model of phobic behaviour. In his analysis phobic avoidance behaviour (a) removes access to reinforcing events and/or (b) results in aversive events occurring to the individual. Thus, by providing access to reinforcing events and/or by avoiding aversive events, approach behaviour may be positively or negatively reinforced. He suggested that the consequation of flooding procedures (in vivo or imaginal) should be taken into account in designing therapeutic applications.

Bruch (1978) points out that modeling and observational learning should not be equated with simple matching of a model's overt behaviour by the observer. In designing modeling treatments the specific behaviours to be demonstrated can be the focus of the design and therefore of the observer's learning. On the other hand the presence and effects of verbal and affective responses accompanying the overt behaviour of the model may be incorporated in the design to inform the observer of the covert processes that lead to the model's overt behaviour. Sarason (1973) labelled this approach "cognitive modeling." Special attention was given to facilitating acquisition by the observer of the model's strategies for generating the appropriate reaction to a situation rather than simple imitation of the appropriate reaction. In the above-mentioned example of an agoraphobic feeling anxious before entering a department store, modeling instruction in the use of a covert assertive statement could

be regarded as providing a strategy that could result in an appropriate reaction to the situation (viz. entering the store and feeling comfortable about doing so).

Thus CM is a technique which has been extensively researched on a number of parameters leading to a substantial body of knowledge. However, the use of CM with clinical populations remains to be documented as almost all research with the technique has used analogue populations. It holds promise in the treatment of agoraphobia for, while it would be expected that in vivo exposure to a feared situation would lead to therapeutic gains, there is an inherent problem in using in vivo exposure when applied to the treatment of agoraphobia: treatment access to the feared situation is often problematical for the agoraphobic. It is time-consuming for therapists to accompany clients on excursions to feared situations. Treatment programmes in which therapists visit the homes of clients (e.g. Emmelkamp, 1974; Everaerd, Rijken & Emmelkamp, 1973; Mathews, 1981) have similarly been time-consuming for therapists compared with clinic-based programmes. However, where the agoraphobic is totally homebound clinic-based programmes would be inaccessible of course. Therapy techniques which offer agoraphobics the opportunity to approach feared situations frequently and regularly both at the clinic and at home would be desirable and CM holds promise in this regard.

III. Covert Assertiveness

A different approach to promoting anxiety reduction has

been to train fearful or phobic individuals in the use of a response incompatible with the anxiety reactions produced in the target situation. Thus, systematic desensitization (Wolpe, 1958, 1969, 1973) has employed muscle relaxation as the response that theoretically inhibits the anxiety elicited by a hierarchy of phobic stimuli. A wide variety of responses other than relaxation also has been used. These include assertive, sexual, and motor responses (Wolpe, 1958); presentation of toys and parental body contact in the treatment of children (Bentler, 1962); and "emotive imagery" such as pride, mirth and excitement (Lazarus & Abramovitz, 1962). Goldstein, Serber & Piaget (1970) reported successfully using artificially induced anger to counteract fear with clinical subjects. Although not described as a CM technique by Goldstein et al (1970), the treatment involved training subjects imaginally to self-model angry responses to anxiety-provoking target situations and then to use these responses in vivo.

While the technique of thought stopping has most often been used in the treatment of obsessions, Rimm (1973) has successfully applied it in combination with covertly expressed assertive responses to the treatment of phobias. He labelled the intervention strategy "covert assertion" (CA). Although diagnostically, obsessive disorders are distinguished from phobic disorders, certain cognitive theorists would see a commonality in that both behaviours are marked by a tendency to engage in self-defeating implicit verbalizations (Ellis, 1962; Beck, 1970).

Rimm (1973) reported on the successful application of CA in a series of case reports involving phobic clients. A controlled experimental study (Rimm, Saunders & Westel, 1975) using snake-fearful female college students reported significantly greater reductions in fearfulness and increased approach behaviour in a CA group compared to attention placebo and no-treatment control groups. In another investigation using CA, Little (1976) investigated the relative contributions of thought-stopping and CA in the treatment of speech anxiety in undergraduates. No differential effectiveness between the groups (thought-stopping only; CA statements; or a combination treatment group) was found.

There has been some evidence that agoraphobics are timid and unassertive: a social timidity factor was found by Marks & Herst (1970), and Hallam & Hafner (1977) reported a social fears factor. Hand, Lamontagne & Marks (1974) made the observation that, in their group treatment of agoraphobics, many of their clients were, for example, inhibited about eating in restaurants and unable to ask strangers for directions in the street, perhaps as a result of their social isolation. Because they had had to cope with varied social situations in the course of therapy, it was reported that some of them had overcome these problems by the post-treatment period. If agoraphobics are shy and unassertive a treatment regimen which fosters assertive expression would seem particularly appropriate. Covert assertiveness was considered to be a potentially useful technique which would tend to

increase the likelihood of agoraphobics practicing non-avoidant behaviour in everyday life.

As far as is known, the literature contains only one report of the treatment of agoraphobia by a technique similar to CA. This single case study reported that the client was successfully trained in the use of induced anger and vigorous muscular activity to inhibit anxiety responses in agoraphobic situations (Butler, 1975).

Borkovec & O'Brien (1976) have criticized analogue studies of fear reduction techniques (which often use small animal phobias as their treatment target) on the grounds that target characteristics were introduced; of susceptibility to non-specific treatment effects; of absence of a substantial physiological fear component; and of irrelevance to clinically significant anxiety. These threaten the internal and external validity of conclusions reached.

The flooding studies reviewed above most often used clinical agoraphobic populations e.g. Emmelkamp, 1974; Emmelkamp & Emmelkamp-Benner, 1975; Emmelkamp, Kuipers & Eggeraat, 1978; Emmelkamp & Wessels, 1975; Everaerd, Rijken & Emmelkamp, 1973; Hand, Lamontagne & Marks, 1974. However analogue studies have predominated in the CM literature e.g. Cautela, Flannery & Hanley, 1974 (rat-fearful undergraduates); Kazdin 1973, 1974a, 1974b, 1974c; Lowe, 1978; Thase & Moss 1976 (snake-fearful college students); Kazdin 1974d, 1975, 1976 (sub-clinical unassertive recruits). This is the case, too, with CA studies e.g. Rimm, Saunders & Westel, 1975

(snake-fearful undergraduates); and Little, 1976 (public-speaking course students).

Thus while many studies exist which investigate aspects of flooding as a treatment for agoraphobia and which use clinical populations, this is not the case for CM and CA techniques which have almost exclusively used analogue populations.

CONSIDERATIONS IN THE DESIGN OF THIS STUDY

The present study examined: (1) the effectiveness of in vivo flooding for agoraphobia in an attempt to replicate European findings, and (2) whether a superior treatment outcome would be obtained when the flooding therapy was supplemented by training in covert modeling and covert assertiveness. To this end a clinical sample of agoraphobics was randomly assigned among three groups: one, the FL/A group, using flooding plus the covert practice of assertion (through CM with an assertive model and the use of assertive self-statements); the second, the FL group, using an in vivo flooding procedure; and the third, the C group, served as a waiting list control.

It was hypothesized that both flooding groups would improve and that the FL/A group would display greater improvement in phobic avoidance of agoraphobic situations than the FL group. It was further hypothesized that this expected result would be maintained at one month follow-up.

In designing a treatment programme for agoraphobia an attempt was made to integrate the knowledge that research has provided with the practical demands of delivery of service. It was deemed desirable for the treatment regimen to have the following characteristics:

1. It should be short-term in duration if possible. The debilitating social consequences of agoraphobia indicate this. A prolonged exposure (flooding) approach has been established as the treatment of choice. The advantages of massed practice

exposure sessions over spaced sessions have been documented by Foa, Jameson, Turner & Rayne (1980). Further, this approach was amenable to group administration.

2. It should be time-efficient for therapists. Given the relatively high incidence of agoraphobia, a group therapy approach was indicated. This has been found to be successful, (Hand, Lamontagne & Marks, 1974, Teasdale, et al, 1977).

3. It would be preferable for this therapy to be agency-based rather than home based. Here again, it would be more economical of therapists' time compared to a home-based programme such as Everaerd, Rijken & Emmelkamp (1973), and Emmelkamp (1974) have used. Unless the therapy is agency-based it cannot be conducted in group format. If agoraphobic clients were unable to travel to an agency on their own, arranging for them to be accompanied would enable them, in most cases, to make the journey.

4. Since the treatment programme should provide as much exposure to feared situations as possible and should extend the range of these situations from those experienced in the group exposure sessions, the CM technique seemed appropriate. Drawing from research findings, the model to be used should have the following attributes: similar-aged and same-sexed; coping in nature (rather than displaying mastery); using covert assertion as a strategy for dealing with difficult situations; receiving positive consequences for success in these situations.

5. The treatment should provide some means of extending

effects over time. To promote such durability, the CA technique was considered to hold promise. It was proposed that this approach would facilitate exposure to difficult situations and provide clients with an aid to use outside group sessions.

METHOD

Subjects

Subjects were 32 outpatients on the waiting list of the Behaviour Therapy Unit at Shaugnessy Hospital, Vancouver, B.C., who had been diagnosed as being agoraphobic according to DSM III criteria (1980) (diagnostic categories 300.21 agoraphobia with panic attacks and 300.22 agoraphobia without panic attacks).

Exclusionary criteria for subject selection were the presence of a major depressive episode, obsessive-compulsive disorder, paranoid personality disorder, or schizophrenia (as required by DSM III, 1980). In addition, the nature of the treatment program required subjects to be present at the clinic but none had to be excluded because of inability to do so. Subjects were not excluded because of use of psychoactive medication. Some subjects were using antidepressants or anxiolytics and they were requested not to increase or decrease dosage during therapy but to continue with their usual therapeutic dose. Subjects on medication had been judged, prior to commencement of this study, to be either unresponsive to their medication, or to have benefitted inadequately from it.

Subjects were randomly assigned to the three groups by a matching procedure (Kazdin, 1980). They were ranked primarily by age and secondarily by years of education, and then consecutively assigned to groups randomly, from highest to

lowest ranked.

Therapist

The therapist for all treatment groups was a male graduate student in clinical psychology at the University of British Columbia with experience in behaviour therapy.

Design

There were three groups in the study.

1. Flooding plus covert practice of assertiveness group (FL/A)

This group received group flooding in vivo as well as CM practice with a covertly assertive model (i.e. one whose strategy was to use assertive statements covertly to deal with anxiety). Clients were asked to imagine the model as "coping" (i.e. initially anxious but eventually overcoming anxiety). In addition, subjects were trained in CA, which was to be used both during flooding sessions and during excursions made from their homes during "homework" assignments.

2. Flooding group (FL)

This group received group flooding in vivo similar to the FL/A group. As a control for the time and attention which the FL/A group received during instruction in the CM procedure and for their home practice of CM, this group was asked to practice visualizing the same scenes as the FL/A group but without a model, for an equivalent period of time. In addition a period of time equivalent to that spent by the FL/A group on

covert assertion training, was allocated to a group discussion of the particular origins of phobic avoidance for each group member.

3. Waiting list control group (C)

These subjects were told that therapy was not available at present but would be available approximately six to eight weeks later. The purpose of using this group was to control for the threats to validity of history, maturation, testing, instrumentation, regression, selection, mortality, and interactions between these (Campbell & Stanley, 1963). Assessments using the same instruments as for the two experimental groups were made.

To form the therapeutic groups, each of the three groups described above was randomly split into three subgroups of about five subjects in each. To promote equivalence of treatment for subgroups within each treatment condition, a therapist's manual (see appendix A) served as a standardized treatment protocol.

Treatment

1. The FL/A group

The three treatment sessions all took place on the first, third, and fifth day of one week. Each session involved a minimum of 2 hours of group exposure to feared situations such as shopping malls or a large park. During the first session group members received training in covert modeling (CM) with a covertly assertive model and in covert assertion (CA) for one hour. These techniques were also rehearsed at the second and

third sessions. At each session time was devoted to a discussion of home-work assignments, whether to be done or already attempted. During the inter-session days 2 and 4, members were to practice CM twice daily for about 10 minutes at each practice session and also attempted to extend the distance and time of excursions their own away from home. This homework was to continue for 30 days after the final group session.

2. The FL group

The treatment for this group was similar to that provided for the FL/A group with two differences: in place of CM with an assertive model, the identical scenes were rehearsed without a model, and, to replace the CA training and practice, a group discussion of the early instances of agoraphobic experiences of group members was held. During this discussion members related examples of agoraphobic episodes. The therapist did not offer interpretation (e.g. precipitating events, family history) regarding these episodes to minimize the possibility of this confounding treatment effects.

3. Waiting-list control group (C)

No treatment was provided to members of this group until after expiry of a 30 day follow-up period. Members were told at the outset that their treatment would commence only after about 6 weeks had passed because of demands on therapists' time.

Instruments

1. Behavioural Diary (BD): (appendix B)

Hand, Lamontagne & Marks (1974) reported difficulties in using a structured, task-oriented behavioural test to measure avoidance behaviour. They found that at post-treatment, subjects reached the most difficult task so frequently that accurate evaluation of progress was not possible. Marks & Mathews (1979) have suggested that a BD yielding the total time spent out of the house each day yields a better measure of everyday non-avoidant behaviour by agoraphobics. The present study used self-reporting in a BD of total number of minutes spent away from home as a dependent measure. The BD also provided for anxiety ratings to be recorded for each excursion.

2. Subject questionnaire (SQ): (appendix C)

Demographic data and other information of relevance to the study were collected prior to treatment using this questionnaire.

3. Fear questionnaire (FQ):

This was a one-page, self-rating form which yielded scores for main phobia, global phobia, total phobia and anxiety-depression, agoraphobia, social phobia, and blood-injury phobia. The instrument is short, reliable, and valid (Marks & Mathews, 1979). The agoraphobia sub-score has been found to have a test-retest reliability of 0.89 over one week. The scale has been factor analysed on over 1,000 phobic subjects and, on independent analysis, consistently yielded

four similar factors (agoraphobia, tissue-damage phobia, social phobia, and anxiety-depression). It was sensitive to clinical improvement after treatment (Marks & Mathews, 1979). Extensive normative data have not yet been reported.

4. Credibility/expectancy for improvement scales (CES):

(appendix D)

The scales proposed by Borkovec & Nau (1972) to rate credibility and the expectancy for improvement in therapy were adapted for this study. It was important to determine whether the rationales and, later, the therapies used for the different treatment groups were equivalent in credibility to subjects and whether they resulted in equivalent expectations for improvement across groups.

The CES was completed after the treatment rationale had been presented at session 1; and then again after completion of session 3.

5. Gambrill & Richey Assertion Inventory (GRAI):

The GRAI was developed as a self-report instrument with two scales: an index of response probability and a second scale indicating the degree of discomfort felt in forty situations involving assertive behaviour (Gambrill & Richey, 1975).

It was completed by subjects before treatment commenced and then again at follow-up, 30 days after completion of treatment.

6. Imagery Assessment Questionnaire (IAQ): (appendix E)

One of the experimental manipulations in this study

involved the presence or absence of a covert model. If present, subjects were required to imagine particular model attributes. It was important therefore to determine whether subjects in fact imagined scenes and models appropriate to their treatment condition (Kazdin, 1974a, 1974b, 1974c, 1974d, 1976). The IAQ was administered to all experimental group subjects and enquired as to the age, sex, and identity of the model (self or other); the difficulty the model had in performing the tasks; the clarity of imagery during the session; the degree of anxiety experienced in imagining the scenes as described.

7. Subjective Anxiety Scale (SAS): (appendix F)

After each group exposure session subjects were asked to rate the peak anxiety felt on these occasions on the SAS. Wolpe (1973) described the units on this scale as SUDS (subjects units of disturbance). The range is from 0 SUDS (state of absolute calm) to 100 SUDS (worst anxiety ever experienced by a subject).

8. Symptom Checklist 90 (SCL 90)

The SCL 90 is an instrument which has been standardized for outpatients (Derogatis, 1977). This was completed by subjects at pretreatment and at 30 day follow-up. It yielded nine symptom dimensions including a phobic anxiety rating which is closely allied to agoraphobic symptomatology. The global severity index (GSI) is a good indicator of the depth of disorder, reflecting the number of symptoms and the intensity of perceived stress (Derogatis, 1977). The SCL 90 is

reported to have good internal consistency (Cronbach's α 0.95 over four weeks) and a test-retest reliability of 0.94 over two weeks (Edwards, 1978).

9. Katz Adjustment Scales (R form) (KAS):

Attention has recently been directed to the importance of the possibility of a discrepancy between statistical significance of change (a probability-based criterion for judging whether a treatment effect is reliable) and clinical significance (the practical value to a client of an intervention), (Garfield, 1978; Kazdin, 1980). Clinical usefulness cannot be appraised by statistical tests alone; other means of evaluating outcome should be used to assess clinical outcome.

One approach in evaluating clinical significance of change has been to obtain ratings of a subject's behaviour from a significant other before and after treatment. The KAS (R form) appeared suitable because it is a broad-ranging instrument designed to be completed by a relative or significant other. The respondent is asked to rate 205 items on four-point scales (Katz & Lyerly, 1963). It covers such parameters as psychiatric symptomatology, social behaviour, the respondent's level of expectation for the subject's performance in social activities, level of free-time activities, and the respondent's satisfaction with these. The KAS (R form) has been widely used in research (cf. Fiske in Waskow & Parloff, 1975). Hogarty, Katz & Lowery (1967), used the scales in a study of day hospital and outpatient

treatment. The scales were sensitive to changes from pretreatment to 2 month and then to 12 month follow-up. Norms were available in the Hogarty & Katz (1971) study on 450 normals and 133 psychiatric outpatients. The KAS have been found to have high concurrent validity and good discriminative ability between well- and poorly-adjusted groups (Katz & Lyerly, 1963). The scales have displayed high interrater reliability (cf. Hogarty in Waskow & Parloff, 1975).

In the present study the KAS were completed by a significant other at pretreatment and then at 30 day follow-up.

10. Homework Record (HR): (appendix G)

To assess whether subjects practiced the CM and covert scene presentation exercises twice a day as required, they were asked to record practices daily on the HR from the first day of treatment to the thirtieth day after the last flooding session.

11. Consent form: (appendix H)

This outlined the programme and its scheduling, and ended with a section for participants to sign their consent to participate.

Assessment

The times of assessment appear on figure 1. Pretreatment instruments were completed one to two weeks before treatment. During treatment instruments were administered as indicated.

A follow-up for the two treatment groups was conducted 30 days after the final group treatment session. Subjects were asked to keep a BD for the seven day period starting 30 days after therapy sessions had ended. On this day they were also asked to complete a FQ, SCL-90, GRAI, IAQ and HR. The same significant other who completed the KAS at pretreatment completed these again at 30 days post-treatment. The follow-up was conducted through the mail.

Subjects in the waiting list control group completed the same instruments as the two treatment groups, except for the IAQ and the HR, at a follow-up 30 days after their initial assessment.

Figure 1

Assessment Time-plan

Assessment \ Days		Pretreatment	Treatment: Flooding Session 1	Treatment: Flooding Session 2	Treatment: Flooding Session 3	Follow-up: Follow-up (1 month)
			1	3	5	35
Subject Questionnaire	SQ	✓				
Fear Questionnaire	FQ	✓			✓	✓
Behavioural diary	BD	✓			✓	✓
Global severity index	GSI	✓				✓
Credibility/expectancy for success	CES		✓		✓	
Katz Adjustment Scales	KAS	✓				✓
Gambrill and Richey Assertiveness Inventory	GRAI	✓				✓
Subjective anxiety scale	SAS		✓	✓	✓	
Imagery assessment questionnaire	IAQ		✓		✓	✓
Homework record	HR		✓ ----------daily----------			✓

RESULTS

Thirty-two of the 36 subjects receiving treatment provided the data required for analysis. Twelve had been randomly allocated to the flooding with covert assertiveness (FL/A) group, nine to the flooding (FL) group, and eleven to the control (C) group. Table 1 summarizes demographic characteristics of these subjects.

Apart from these 32 subjects whose data were analysed, an additional four subjects withdrew from therapy and their data were not included in this study. One subject, originally in the FL/A group, reported having been prevented from attending two therapy sessions by compulsive rituals. With regard to the FL group, one subject missed two therapy sessions due to job demands and a second had to be hospitalized for multiple psychological problems including depression. One control subject withdrew from the study before completing follow-up measures as he judged himself to have recovered.

Group Equivalence: A MANOVA among the three groups on the variables age, duration of illness, and length of education, yielded no significant differences $F(6.54)=.58$, $p>.73$. The proportions of males and females in the groups were tested for independence from group membership and no association was found, $chi^2 = .18$, $p>.91$. Thus the groups appeared to be equivalent and well-matched on these demographic parameters.

One-way analyses of variance on each of the 19 dependent

Table 1

Demographic Characteristics of Treated Subjects (Excluding Drop-outs)

	Group			
	FL/A (n=12)	FL (n=9)	Control (n=11)	Total (n=32)
Age at screening (years)				
Mean	37.75	40.33	31.36	36.28
SD	11.83	15.60	5.46	11.67
Range	29--65	19--66	24--39	19--66
Duration of agoraphobia (years)				
Mean	11.75	14.44	8.91	11.53
SD	14.31	16.35	7.85	12.90
Range	1--50	1--53	2--30	1--53
Post-grade 12 education (years)				
Mean	5.67	5.00	5.73	5.50
SD	2.90	3.54	1.85	2.72
Range	1--11	0--12	3--9	0--12
Sex no.(%)				
Male	3(25.0%)	3(33.3%)	3(27.3%)	9(28.1%)
Female	9(75.0%)	6(66.7%)	8(72.7%)	23(71.9%)
Ratio: male/female (%)	(33.3%)	(50.0%)	(37.5%)	
Marital Status no.(%)				
Living with partner	6(50.0%)	5(55.6%)	6(54.5%)	17(53.1%)
Living alone	6(50.0%)	4(44.4%)	5(45.5%)	15(46.9%)

variables from the five instruments measuring treatment outcome indicated no significant differences among groups on any variable at pretreatment except for a significant treatment effect on the phobic-anxiety subscale of the SCL-90, $F(2,28)=4.33$, $p<.05$. On this measure group means were 1.62 (FL/A group), 2.89 (FL), and 2.32 (controls). However, on these 19 variables plus the five demographic characteristics inspected, it was not unlikely that there could be one errant pretreatment measure significantly different among groups by chance alone.

Treatment Process Measures: The mean scores of the two treatment groups after the third (final) exposure session on the "credibility/expectancy for success" scale were compared. On a scale ranging from 0 to 40 these means were 30.75 for the FL/A group and 32.00 for the FL group. The difference between them was found to be nonsignificant on a two-sample t-test, $t(18)=.37$, $p>.71$.

The imagery assessment questionnaire (IAQ) was designed to gauge to what extent the imagery used by subjects was as prescribed for their treatment group. On the IAQ each of the following five attributes was scored correct if responded to in the appropriate direction: presence/absence of model; same/opposite sex of model; same/different age of model; coping/mastery style of model; and presence/absence of assertive statement by model. Thus a maximum score of five could be attained. On this basis there was no significant

difference between the FL/A group with a mean score of 85% correct and the FL group with 87.5% correct, $t(18)=.18$, $p>.86$. Both groups adhered very closely to the imagery parameters specified for their treatment condition.

It is important to know to what extent the treatment group subjects complied in frequency and duration of home practice of the imagery exercises. When practice was measured by calculating the daily mean number of minutes for each imagery session over the 35 day imagery practice period and comparing the means of the groups FL/A and FL by a two-sample t-test, no significant difference was found (means 7.11 minutes and 5.06 minutes respectively; $t(13)=1.07$, $p>.30$). Similarly when an alternative method of estimating consistency in conducting homework imagery exercises was used, i.e. the number of days on which at least one imagery session was held at home, no significant group differences were found (mean for FL/A group 20.71 days, and mean for the FL group 19.38 days; $t(13)=.35$, $p>.30$.

Treatment Outcome Measures:

Fear Questionnaire:

An analysis of covariance by treatments was computed on the posttreatment scores for each subscore on the fear questionnaire (FQ) using pretreatment scores as the covariate. Table 3 summarizes the adjusted posttreatment means for each group and the F values resulting from the analyses of these six subscores. The data indicated that there were significant

Table 3

Results of Analyses of Covariance[c] Performed on the Fear Questionnaire Scores Obtained at Posttreatment and One Month Follow-up

Measure	Group Means			MSw[a]	F[d]	p[b]
	Control	FL/A	FL			
Global phobia						
posttreatment	6.00	4.63	3.33	2.32	6.56	<.01
one month follow-up	6.05	3.59	3.99	3.23	5.76	<.01
Total phobia						
posttreatment	59.31	43.12	35.51	163.85	8.27	<.001
one month follow-up	59.66	42.24	42.09	287.23	3.84	<.05
Agoraphobia						
posttreatment	25.46	13.97	12.61	27.63	17.29	<.0001
one month follow-up	25.84	13.73	15.23	66.68	7.18	<.01
Blood-injury phobia						
posttreatment	14.82	11.47	10.24	36.18	1.44	>.25
one month follow-up	15.13	12.03	13.28	40.52	.69	>.50
Social phobia						
posttreatment	19.19	17.40	12.77	22.77	3.93	<.05
one month follow-up	18.68	16.34	13.82	25.58	2.29	>.12
Anxiety-depression						
posttreatment	22.21	17.05	14.24	40.91	3.63	<.05
one month follow-up	22.82	12.56	13.43	65.59	5.29	<.01

Note: a MSb for treatments are reproducible from F X MSw
b One-tailed probability estimates due to directional hypotheses
c Pretreatment scores are the covariate
d df at posttreatment are 2,23. At follow-up df are 2,27 for global phobia and anxiety-depression, and 2,28 for the other measures.

treatment effects ($p<.05$) on global phobia, total phobia, agoraphobia, social phobia, and anxiety-depression subscores but not on blood-injury phobia subscores. When subscores at posttreatment were tested by planned orthogonal contrasts to determine whether there were significant differences between subjects from treatment groups on the one hand and those in the control group on the other, significant differences ($p<.05$) were found for the subscores: global phobia, total phobia, agoraphobia, anxiety-depression, and social phobia. On all comparisons, the treatment groups consistently performed better than the control group. There was no statistically significant treatment effect on blood-injury subscores. Planned orthogonal contrasts between the two treatment groups at posttreatment yielded no significant differences on any subscale.

A similar analysis of covariance at one month follow-up with pretreatment scores as the covariate is presented below the posttreatment scores on Table 3. In general there seemed to be a somewhat attenuated pattern of treatment effect. While significant treatment effects ($p<.05$) were sustained on global phobia, total phobia, agoraphobia and anxiety-depression, these were generally less marked than at posttreatment. Once again the blood-injury score did not indicate significant treatment effects. There were no significant treatment effects on the social phobia scale at this phase. Planned orthogonal contrasts at one month follow-up once again indicated significant differences between the control group and the

treatment groups on the subscales for global phobia, total phobia, agoraphobia, social phobia and anxiety-depression. On each contrast the treatment group scores were significantly lower than control scores. There were no significant differences between the results of the two treatment groups.

To pursue further the possibility that there was a change in treatment effects a two-way analysis of covariance was computed using the pretreatment score as covariate. The two factors were treatments and phases (posttreatment and one month follow-up). Control group data could not be included because this group had not been assessed at a time equivalent to termination of treatment. The adjusted means and the F values for the treatment factor are presented in Table 4. No significant treatment or interaction effects were found but the phase effect on the anxiety-depression variable was significant, $F(1,13)=4.09$, $p<.05$, with adjusted mean scores indicating continued decreases from posttreatment to one month follow-up.

The FQ administered pre-treatment, required subjects to rate their degree of avoidance for various agoraphobic situations when they were remote from these situations. Typically these FQs were completed at home and subjects estimated their degree of avoidance when they were removed in time and place from the situations listed. When pre-treatment individual agoraphobia subscores on the FQ were compared with the means of individual peak anxiety ratings reported immediately after each exposure session on the subjective

Table 4

Results of Two-Way Analyses of Covariance[c,d] Performed on Fear Questionnaire Scores Obtained at Posttreatment and One Month Follow-up

Measure	Group Means		MSw[a]	F[e]	p[b]
	FL/A	FL			
Global phobia					
posttreatment	4.51	3.56	4.69	.05	>.83
one month follow-up	3.13	3.70			
Total phobia					
posttreatment	43.44	34.43	459.24	.47	>.50
one month follow-up	38.55	36.86			
Agoraphobia					
posttreatment	13.32	12.58	100.23	.09	>.76
one month follow-up	9.99	13.01			
Blood-injury phobia					
posttreatment	11.85	10.47	22.96	.31	>.58
one month follow-up	12.30	11.76			
Social phobia					
posttreatment	17.27	12.65	54.73	1.53	>.23
one month follow-up	15.27	13.36			
Anxiety-depression					
posttreatment	17.66	14.32	62.16	.11	>.74
one month follow-up	10.54	11.96			

Note: a MSb for treatments are reproducible from F X MSw
b One-tailed probability estimates due to directional hypotheses
c Pretreatment scores are the covariate
d Data are presented on the treatment factor only
e df for global phobia and anxiety-depression are 1,12 and are 1,13 for the other measures

anxiety scale (SAS) there was a highly significant correlation, $r=.59$, $p<.01$. This indicated a high degree of association between the FQ agoraphobia avoidance subscores (anticipated) and SAS mean scores (reported as experienced by subjects), and added validity to the FQ as a measurement of agoraphobic avoidance.

An analysis of variance (treatments X imagery practice) was computed on the variable agoraphobia score (from the fear questionnaire) at one month follow-up, with groups partitioned using as cut-off the median number of days during which at least one imagery practice session had been held, into high practice and low practice groups. Cell means are reported in Table 5 and results of the analysis of variance in Table 6. Significant effects were found for the treatment factor, $p<.05$, and the imagery practice level factor, $p<.05$, with lower scores (better outcomes) being reported by the FL/A and high imagery practice level groups. The interaction effect was not significant.

The analysis was then repeated with GSI at one month follow-up as the self-report measure. Effects did not reach significance, ($p>.05$).

Subjective Anxiety Scale: A profile analysis was performed on the SAS for the two treatment groups (Figure 2). The test for equality of means (flatness of profile) produced an $F(2,18)=1.03$, $p>.37$, which indicated that for both groups, differing levels of anxiety were experienced when comparing

Table 5

Cross-tabulation of Cell Means for Agoraphobia Score (Treatment versus Imagery Practice Level) on the Fear Questionnaire

Imagery Practice Level (days)	Treatment	
	FL/A	FL
Low	15.50 (3)[a]	24.25 (4)
High	2.00 (3)	15.50 (4)

Note: a ( ) indicates number of subjects

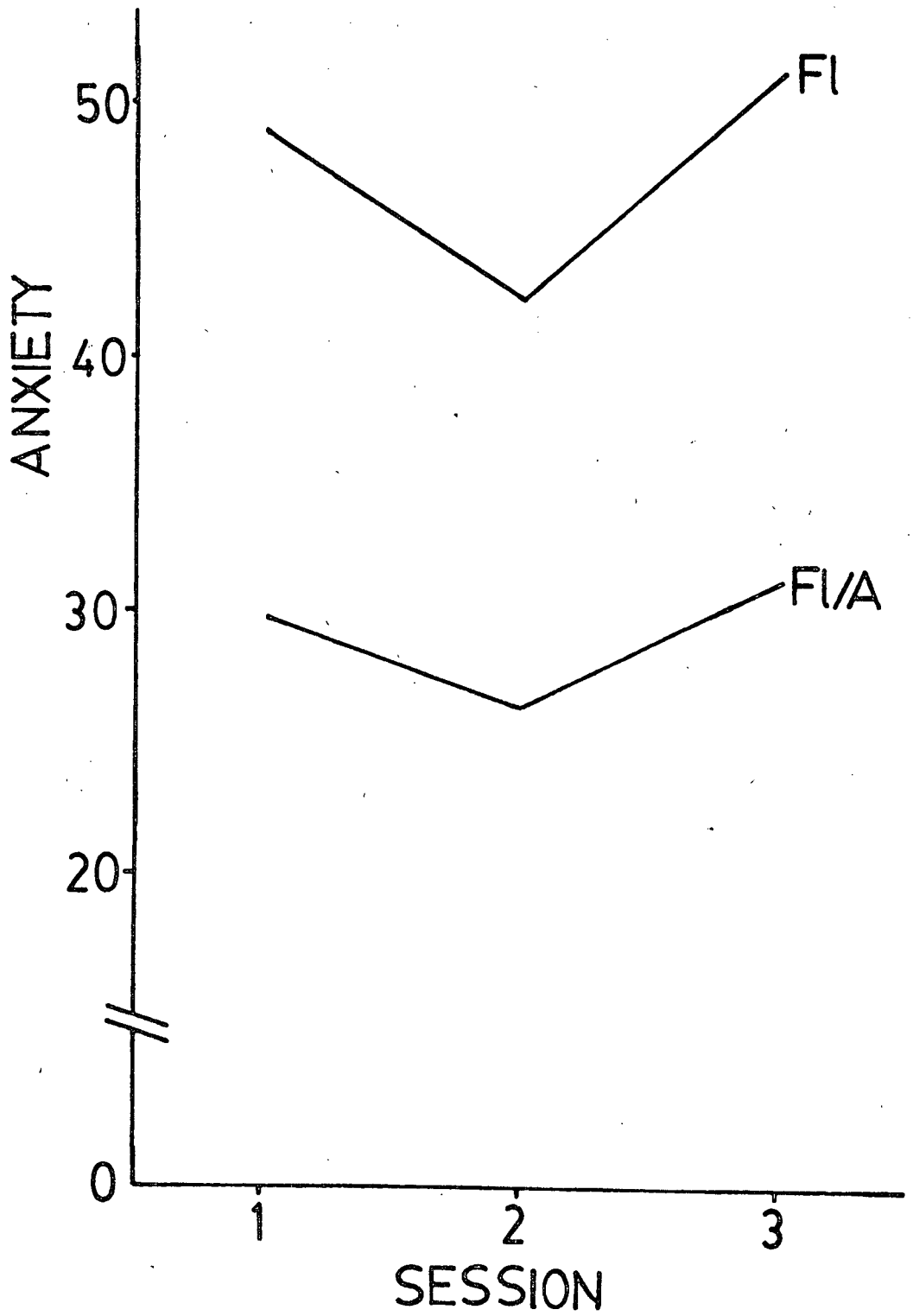
Table 6

Results of Two-way Analyses of Variance (Treatment versus Imagery Practice Level) on Agoraphobia Score of Fear Questionnaire at One Month Follow-up

Source	MSb	F[a,c]	p[b]
Treatment	444.73	4.48	<.05
Imagery practice level	444.73	4.48	<.05
Interaction (Treatment X Practice Level)	20.83	0.21	>.65

Note: a MSw=99.34
b One-tailed probabilities due to directional hypotheses
c df=1,11

FIGURE 2



Subjective peak anxiety reported by FL (flooding) and FL/A (flooding + covert practice) groups for flooding sessions.

the three different in vivo exposure sites. The test for parallelism indicated that anxiety profiles for the two groups were parallel, $F(2,18)=.08$, $p>.92$, suggesting that the FL/A group and the FL group ranked the anxiety experienced very similarly. For both the FL/A and the FL treatment groups the excursion to a downtown underground shopping mall (session three) was most anxiety-provoking; followed by the excusion to a suburban department store. The trip to a medium-sized suburban park was least anxiety-provoking (session one). On the levels test, it was found that the two groups differed significantly from each other in the mean level of anxiety over the three sessions, $F(1,19)=3.77$, $p<.05$, with the FL/A consistently reporting less subjective anxiety than the FL group. The SAS scores for each exposure session are presented in Table 2.

SCL-90: Using the pretreatment score as the covariate, an analysis of covariance was computed between groups at one month follow-up on the global severity index (GSI), phobic anxiety, and depression subscores of the SCL-90 questionnaire. These adjusted means are summarized in Table 7 together with F values resulting from the analyses of these three subscores. Significant effects on the treatment factor were indicated on the GSI, $p<.05$; phobic-anxiety, $p<.001$; and depression scores, $p<.01$. Planned orthogonal contrasts indicate significant differences between treatment groups on the one hand and the control group on the other on all three of these variables

Table 2

Mean Subjective Anxiety Scores[a] by Exposure Session -- Group Comparison

Treatment	Exposure Session		
	1	2	3
FL /A	29.75	26.08	31.42
FL	48.89	42.22	51.11

Note: a On Subjective Units of Distress Scale range 0--100

Table 7

Results of Analyses of Covariance[d] Performed on SCL-90 Scores at One Month Follow-up

Measure	Group Means			MSw[a]	F[c]	p[b]
	Control	FL/A	FL			
GSI						
one month follow-up	1.64	1.10	1.14	.21	4.47	<.05
Phobic anxiety						
one month follow-up	2.67	1.35	1.61	.36	14.30	<.0001
Depression						
one month follow-up	2.00	1.17	1.54	.32	5.70	<.01

Note: a MS for treatments are reproducible from F X MSw
b One-tailed probability estimates due to directional hypotheses
c df=2,26
d Pre-treatment means are the covariate

($p<.01$). Contrasts between the two treatment groups did not reach significance, ($p>.05$).

As an indication of whether there was a correlation between length of illness and the differential in posttreatment compared with pretreatment global severity index (GSI) scores, a part correlation was computed (Glass & Stanley, 1970). This is the correlation of duration of illness (in years) with the posttreatment GSI, after that portion of the posttreatment GSI which can be predicted linearly from the pretreatment GSI has been removed from the posttreatment GSI. A significant correlation was obtained between this residual gain score and duration of illness, $r=.53$, $p<.05$. Higher GSI scores indicated more severe symptomatology.

Behavioural Diary: Four subscores computed from the data on the behavioural diary (BD) were subjected to analysis of covariance first at posttreatment phase, and then at one month follow-up. Pretreatment scores were the covariate. Daily time away was computed as the mean daily number of hours spent away from home over a seven-day period. This mean was partitioned between mean daily hours spent on activities when the subject was accompanied and when unaccompanied. The fourth subscore, mean anxiety, was computed as follows: the diary forms required subjects to rate their peak subjective anxiety for each change in activity away from home (e.g. a busride to a dentist followed by lunch at a restaurant would produce three ratings). The weekly arithmetic mean of these ratings provided

the index.

Results of the analysis of covariance by treatments on these four variables with the pretreatment scores as covariate are reported in Table 8. For each measure, adjusted means at posttreatment phase and at one month follow-up were recorded. At posttreatment no significant treatment effects were found, while at one month follow-up the variable daily time away (unaccompanied) yielded significant treatment effects, significant, $F(2,25)=2.95$, $p<.05$, with both treatment groups spending more time away from home when unaccompanied than the controls, although not significantly so. While treatment effects just missed significance for daily time away (alone or accompanied) at one month follow-up, $F(2,25)=2.34$, $p=.058$, planned orthogonal contrasts confirmed a significant difference between the two treated group adjusted means on this measure with the FL/A group spending significantly more total time away from home than the FL group.

This treatment effect was strongly confirmed on a two-way analysis of covariance (Table 9) (treatments versus phases, with pretreatment scores as covariate) by a highly significant treatment effect ($p<.01$) with the FL/A group spending significantly more total time away from home than the FL group. No other treatment, phase, or interaction effects reached significance on this analysis.

Gambrill & Richey Assertiveness Inventory: Table 10 presents the results of an analysis of covariance by treatments on

Table 8

Results of Analyses of Covariance[c] Performed on Behavioural Diary Scores at Posttreatment and One Month Follow-up

Measure	Group Means C	FL/A	FL	MSw	F[a,f]	p[b]
Daily time away[d]						
posttreatment	4.22	5.16	4.01	1.86	1.16	>.33
one month follow-up	4.44	6.10	4.40	3.68	2.34	>.11
Daily time away[d] (accompanied)						
posttreatment	2.07	2.19	1.59	1.03	.63	>.54
one month follow-up	2.16	1.99	1.66	1.19	.45	>.64
Daily time away[d] (unaccompanied)						
posttreatment	1.78	3.36	2.45	2.64	1.87	>.18
one month follow-up	2.22	4.16	2.72	3.42	2.95	<.05
Mean anxiety[e]						
posttreatment	33.54	19.61	24.31	234.44	1.57	>.23
one month follow-up	34.71	15.17	29.42	347.92	2.48	>.10

Note:
a MS for treatments are reproducible from F X MSw
b One-tailed probability estimates due to directional hypotheses
c Pretreatment scores are the covariate
d Mean hours per day spent away from home over seven-day period
e Mean anxiety per day while away from home over seven-day period
f df at posttreatment are 2,19. At follow-up df are 2,25 for all measures except for anxiety-depression 2,24

Table 9

Results of Two-Way Analyses of Covariance[c,g] on Behavioral Diary Scores at Posttreatment and One Month Follow-up

Measure	Group Means FL/A	Group Means FL	MSw[a]	F[d]	p[b]
Daily time away[e]					
posttreatment	6.01	3.72	3.50	8.59	<.01
one month follow-up	6.56	3.30			
Daily time away (accompanied)[e]					
posttreatment	2.27	1.64	2.00	.96	>.34
one month follow-up	2.14	1.64			
Daily time away (unaccompanied)[e]					
posttreatment	3.53	2.42	7.19	1.61	>.23
one month follow-up	4.21	2.00			
Mean anxiety[f]					
posttreatment	12.01	26.90	388.28	2.69	>.13
one month follow-up	4.67	27.85			

Note:
a MSb for treatments are reproducible from F X MSw
b One-tailed probability estimates due to directional hypotheses
c Pretreatment scores are the covariate
d df=1,10
e Mean hours per day spent away from home over seven-day period
f Mean anxiety per day while away from home over seven-day period
g Data are presented on the treatment factor only

adjusted means of the Gambrill and Richey Assertiveness Inventory at one month follow-up with pretreatment scores as the covariate. Although there were no significant treatment effects at this time on either of the subscales (distress rating and response probability), planned orthogonal contrasts indicated that treated subjects had significantly lower distress ratings for assertive behaviour than control subjects. On neither of the subscales were there significant differences between the FL/A and FL groups.

Katz Adjustment Scales: An analysis of covariance by treatments at one month follow-up was computed on four subscores from the Katz Adjustment Scales with pretreatment scores as covariate. These adjusted scores are reported in Table 11. The R1 subscale reflects ratings of symptoms and social behaviour (higher scores indicating increasing pathology). The R2 subscale assesses the level of performance of socially expected activities (higher scores reflecting better social performance). The R3 subscale taps the level of expectations for the subject's performance of social activities with higher scores indicating increasing expectations by significant others. Dissatisfaction is a discrepancy score reflecting the level of discontentment with a subject's social activities and is computed by summing ratios computed at the item level from the formula 100(R3–R2)/R3. Higher scores suggest increasing dissatisfaction.

Table 10

Results of Analyses of Covariance[d] on Gambrill & Richey Assertiveness Inventory at One Month Follow-up

Measure	Group Means			MSw[a]	F[c]	p[b]
	Control	FL/A	FL			
Distress rating one month follow-up	108.31	102.22	89.60	363.32	2.44	>.10
Response probability one month follow-up	115.87	109.50	113.25	67.06	1.74	>.19

Note: a MSb for treatments are reproducible from F X MSw
b One-tailed probability estimates due to directional hypotheses
c df=2,28
d Pre-treatment means are the covariate

Table 11

Results of Analyses of Covariance[c] on Katz Adjustment Scales at One Month Follow-up

Measure	Group Means			MSw[a]	F[d]	p[b]
	Control	FL/A	FL			
Dissatisfaction one month follow-up	5.41	8.58	6.55	38.03	.33	>.72
R1 score one month follow-up	227.13	209.17	220.79	201.08	3.44	<.05
R2 score one month follow-up	38.14	35.65	38.41	9.29	1.63	>.22
R3 score one month follow-up	36.26	39.41	40.29	9.28	3.84	<.05

Note: a MSb for treatments are reproducible from F X MSw
b One-tailed probability estimates due to directional hypotheses
c Pre-treatment means are the covariate
d Degrees of freedom are 2,17 for dissatisfaction score; 2,21 for R1 score; 2,19 for R2 score; 2,18 for R3 score

For the variables R1 and R3 a significant treatment effect was found with planned orthogonal contrasts indicating a significant difference between adjusted mean scores for the control subjects on the one hand and treated subjects on the other, on each of these two variables. Significant differences were not found by planned orthogonal contrasts between the two treatment groups.

Throughout analyses on treatment outcome measures, wherever treatment effects yielded significant differences between groups, these consistently indicated better performance by treated groups compared to the control group.

DISCUSSION

Process findings

The results of the impact of the experimental treatments on process measures will be considered first. These concern data relevant to the process of therapy itself, as distinct from the outcome data.

Subjects in both treatment groups, through their responses on the credibility/expectancy for success scale reported, on average, by the end of the last exposure session, that they "were very confident" about success with the therapy offered and that "it seems very logical." This expectation represented an overall improvement over the course of the treatment programme for 75% of the subjects. This finding was of interest as flooding therapies are reputed to have negative connotations for many clients yet this finding suggests increasing acceptability from first to last exposure session. In support of this it was noted that no subject terminated therapy before the three exposure sessions were completed for the reason that the exposure was too aversive or too difficult to endure. One subject fled from the group and hid herself in the clinic just as the group was about to leave on the first excursion but continued with the outing after a group discussion. She ultimately completed therapy with, as it turned out, one of the more dramatic gains. Of the 60 subject-sessions conducted, only one was missed. Thus although

flooding has the reputation of being "one of the most unpleasant of the behaviour therapies" (Rimm & Masters, 1979, p. 307); and has been described as a 'sink-or-swim" technique (Bernstein & Nietzel, 1980, p. 370), the evidence from subjects indicates that it is an acceptable form of therapy.

The self reported anxiety data suggested that the group receiving cognitive strategies in addition to flooding (FL/A) experienced a lower level of anxiety than the group receiving flooding (FL). Since members of each group had had only four days to practice imagery it was likely that the covert assertiveness practice accounted for diminished anxiety reported by FL/A group members. This corroborated the rapid progress reported by Rimm (1973) whose phobic clients showed significant decreases in anxiety after only one or two training sessions in this technique.

The consistency with which subjects in each treatment group ranked the three excursions in terms of level of anxiety experienced raises the question of the ordering of exposure, i.e. the effect of presenting situations in hierachies of ascending, descending or mixed order. In general findings on this have been equivocal in the case of systematic desensitization (Rimm & Masters, 1979), although this parameter has not been investigated in the case of flooding.

Subjects appeared to understand and comply with the prescribed image attributes in the imagery exercises, with about 86% of these being correct in each treatment group. One can thus be reasonably confident that, when practiced, the

images produced conformed to therapeutic specifications. The two treatment groups were very similar with regard to diligence in practicing imagery. The mean length of imagery sessions held at home was very similar for both groups and these were held on about the same number of days. The homework record results indicated that in many cases during the first three weeks exercises were done quite consistently but this declined over the last two weeks. There were no significant differences between the two treatment groups on differences of homework practice.

Outcome findings

There was a clear indication on self-report scores of the effectiveness of the treatment package offered, with treated subjects improving significantly more than controls. In general, target symptoms, global measures, and depression all significantly benefitted, but there were no clear advantages gained by augmenting flooding with covert procedures on these outcome measures. Significant gains were made by subjects in both treatment groups on the two self-report instruments used, the fear questionnaire (FQ) and the Symptom Checklist - 90 (SCL-90). The target symptom, agoraphobia, showed highly significant improvements on both these instruments at posttreatment and one month follow-up. Consistent with this, broader measures of phobic pathology (total and global phobia on the FQ), and general psychopathology (global severity index on the SCL-90) indicated improvement of a more general nature.

At posttreatment the improvements on FQ subscales tended to be stronger than at one month follow-up. This might reflect increased motivation and hopefulness immediately after therapy which subsided to more realistic levels in the weeks thereafter.

Turning to the possibility of therapeutic effects generalizing across symptoms, it was clear that the blood-injury subscale on the FQ was largely unaffected by therapy. There was some indication that improvement in social phobia was manifest at posttreatment, and at one month follow-up treated subjects had significantly better scores than controls.

Agoraphobia is frequently accompanied by depression (Bowen, 1979; DSM III, 1980; Hallam & Hafner, 1978). Both measures in this study which tap this domain (subscales of the FQ and the SCL-90), showed strong treatment effects which were well maintained from posttreatment to follow-up. This confirmed findings by Mathews et al (1976) after in vivo exposure treatment and by Emmelkamp and Kuipers (1979) after a four year follow-up.

Results of analysis of the behavioural diary (BD) showed that the strong effects indicating positive therapeutic gains found on many of the subjective measures were less evident on the behavioural measure. Those significant gains that were found in the BD seemed to develop between posttreatment and one month follow-up since none of the analyses on the four behavioural indices revealed change at posttreatment but group

differences emerged at follow up.

The lagged response that behaviour showed when compared to the reports of subjective experience has been described as desynchrony by Rachman and Hodgson (1974). This term describes a low or inverse correlation between different response systems reflecting common psychological processes (in this case cognitive and behavioural). Most studies with agoraphobics have investigated the relationship between physiological measures and either cognitive (self-report) or behavioural measures of anxiety (e.g. Hafner & Marks, 1976; Mathews, Johnston, Lancashire, Munby, Shaw, & Gelder, 1976; Stern & Marks, 1973). The broad finding has been one of desynchrony among the response systems. It could be that the initial changes would be in the cognitions of group members concerning their abilities to cope with feared situations, or in their increased confidence that dreaded consequences, such as fainting, screaming or fleeing, would not happen during the stringent demands of the exposure sessions. These might then be followed with some lag, by behavioural manifestations of an improved cognitive set. This proposal corresponds closely to the opinions of Emmelkamp et al (1978), seconded by Ellis (1979), who feel that the effects of prolonged exposure may lead clients to change negative self-statements about dreaded consequences of being in certain situations to positive ones. This would be reconfirmed for clients through continuing exposure in their day-to-day lives. The FL/A group spent significantly more total time away from home than the FL group

at follow-up. It was also found the FL/A treatment package had a significant effect on the time spent unaccompanied away from home. One of the characteristics of agoraphobia is a strong preference or an insistence by sufferers to be accompanied on excursions from home. It was encouraging therefore to note that increased time spent away from home appeared to be due to an increase in unaccompanied ventures at the expense of accompanied ventures and not the contrary.

Reports on the Katz Adjustment Scales (KAS) were provided by significant others in an attempt to obtain ecological validation of the changes reported by group members themselves. One month follow-up indicated significantly increased expectations by these significant others for the social performance of subjects. It may be that they were encouraged by the reductions in depressive symptomatology and by the gains made in increased unaccompanied time spent away from home by subjects. Certainly the trend on the subscale reflecting general symptomatology and social performance indicated that significant others detected improvement.

Although assertiveness-training was not part of this therapy package, it was interesting to note that at one month follow-up the treatment groups were significantly improved compared to the control group. It may have been that the improvement was associated with increased social interaction facilitated by the higher level of mobility achieved. On the other hand the improvements in social skills and assertive behaviour may have been the result of the group process itself

which called for extensive discussion, open exchanges on the implications of being agoraphobic, opportunities for giving and receiving praise,and empathic support. Thus the trend displayed on the social phobia subscale of the FQ where there were significant group differences between control subjects and treated subjects both at posttreatment and one month follow-up, may be associated with decreased discomfort reported in situations requiring assertiveness.

The study by Mathews, Johnston, Lancashire, Munby, Shaw, and Gelder (1976) suggested that longer duration of agoraphobia was associated with worse outcome (although their correlation narrowly missed significance and they did not indicate how outcome was measured). In contrast the present study finds a strong positive correlation between residual gain on the global severity index (which measures level of general psychopathology) at one month follow-up, and duration of illness. Longer duration of illness was thus associated with an increase in GSI scores (i.e. a more severe general symptomatology) above that which would have been predicted from pretreatment GSI. This implied a more refractory response to this therapy for longer illness duration but on the other hand, a more responsive outcome for shorter duration.

It was clear that treated subjects outperformed control subjects on most of the subjective and behavioural outcome measures. However, there were few significant differences between the two treatment groups. While there was a consistent trend for the FL/A group to outperform the FL group, the

differences reach significance in few instances. One outcome measure indicated better behavioural performance for the FL/A group. The total time spent away from home by these subjects was significantly greater at one month follow-up than for FL subjects. In one sense this is a pivotal measure for, without tangible proof to group-members that they were able to spend more time out after therapy than before, one could not reasonably expect any gains in confidence that the idiosyncratic dreaded event (e.g. fainting, heart failure, screaming) was unlikely to occur. There were, however, no concommitant decreases in the anxiety ratings reported on diaries.

One process measure, the SAS, indicated clearly that, during therapy, the group provided with covert techniques reported substantially less anxiety than the group without. Indications were that it was the covert assertiveness technique that was the major agent causing the decrement. It was unlikely that the covert modeling practice could have had much chance to make a significant impact as early as the first, second or even the third group exposure session given the brief practice times involved. On the other hand, covert assertiveness has been found to be clinically effective almost from the first application of the technique, (Rimm, 1973). Spontaneous verbal comments from group members in this study attributed marked relief from anxiety to the use of covert assertiveness. This lends support to the usefulness of this technique in alleviating anxiety in phobic disorders. It is

also possible that the combination of covert assertiveness with covert modeling potentiated the effect of covert assertiveness.

Considering the effects of continued practice of covert modeling, this study found that the FL/A group had lower agoraphobia scores at one month follow-up than the FL group with high-level practice in each group associated with lower scores than low-level practice. These effects disappeared however when initial differences between the two groups at pretreatment were covaried out. When the alternative measure of level of homework practice was used (mean number of minutes per session) no differences were found. The effect of practice level must therefore remain an uncertain, or at best a weak, finding.

It would have been desirable to have had follow-up periods longer than a month; many studies (e.g. Hand et al 1974; Teasdale et al, 1977) provide three-month follow-up data. It is possible that after a three month period further differences between treatments would have become apparent.

In discussing the implications of cognitive concepts for behaviour therapy, Marzillier (1980) makes a useful distinction among three categories of usage of cognitions. Cognitive events may be construed as thoughts or images occurring in the stream of consciousness. Secondly, cognitive processes transform and process internal and external stimuli and therapy operating at this level aims to remedy deficiencies in these processes. The third usage postulates

cognitive structures and describes more deep-seated cognitive aspects of functioning which serve to organise and direct experience at a more fundemental level. The covert techniques used in this study constitute "cognitive therapy" only insofar as they deal with cognitive events. The cognitive restructuring techniques used by Emmelkamp, Kuipers, and Eggeraat (1978) focussed on cognitive processes and structures and were found to be clearly less effective than prolonged exposure. A study by Williams and Rappoport (note 1) which focussed on the driving phobia aspect of agoraphobia used the cognitive strategies of distraction, cognitive restructuring, and use of positive self-statements in therapy. These cover Marzillier's categories of both cognitive events and processes. It was found that in vivo exposure was a superior approach to thought modification. Thus, in the limited research reported using cognitive techniques with agoraphobia, it appears that they are relatively ineffective in improving outcome measures. In contrast the present study found covert assertiveness useful as a technique for reducing anxiety during exposure.

The efficiency of using a group exposure approach in the treatment of agoraphobia was confirmed. One therapist comfortably managed five group members and over three sessions of about five hours each, three therapist-hours per group-member were expended. To this should be added one hour for a pretreatment interview. Unlike the Hand et al (1974) study no further meetings with the therapist were scheduled after

exposure sessions although group-members were told that if their problem was not improving or if their situation seemed intolerable, further individual therapy was available. Only two of the 32 subjects requested this by one month follow up. A treatment strategy that uses brief group therapy as the primary intervention on the assumption that it is effective for most agoraphobics, could then be supplemented by further individual or group therapy for the few that require it.

The therapy offered in this study might be conceptualized as a treatment package (Kazdin, 1980). The study investigated whether a multi-faceted approach might enhance therapeutic effects when compared to the basic flooding in vivo strategy. Since there was evidence that this was the case in some respects, particular components of the package might now be subjected to finer-grained analysis in future research to determine more precisely their individual contributions to behaviour change.

REFERENCE NOTE

1. Williams, S. L., & Rappoport, J. A. Behavioral practice with and without thought modification for agoraphobics. Paper presented at the American Psychological Association convention, Montreal, Canada, September 1980.

REFERENCES

Agras, S., Sylvester, D., & Oliveau D. The epidemiology of common fears and phobias. Comprehensive Psychiatry, 1969, 10, 151-156.

Andrews, J. D. W. Psychotherapy of phobias. Psychological Bulletin, 1966, 66, 455-480.

Arrindell, W. A. Dimensional structure & psychopathology correlates of the Fear Survey Schedule (FSS III) in a phobic population: A factorial definition of agoraphobia. Behaviour Research & Therapy, 1980, 18, 229-242.

Bandura, A. Psychotherapy based upon modeling principles. In Bergin A. E. & Garfield S. L. (Eds.) Handbook of Psychotherapy & Behavior Change. New York: Wiley, 1971.

Bandura, A. Principles of Behavior Modification. New York: Holt, 1969.

Bandura, A. Social Learning Theory. Englewood Cliffs, N.J.: Prentice-Hall, 1977.

Beck, A. T. Cognitive therapy: nature & relation to behavior therapy. Behavior Therapy, 1970, 1, 184-200.

Bentler, P. M. An infant's phobia treated with reciprocal inhibition therapy. Journal of Child Psychology & Psychiatry, 1962, 3, 185-189.

Bernstein, D.A., & Nietzel, M. T. Introduction to Clinical Psychology. New York: McGraw-Hill Book Company, 1980.

Borkovec, T. D., & Nau, S. D. Credibility of analogue therapy rationales. Journal of Behavior Therapy & Experimental Psychiatry, 1972, 3, 257-260.

Borkovec, T. D., & O'Brien, G. T. Methodological and target behavior issues in analogue therapy outcome research. In Hersen, M., Eisler, R. M., & Miller, P. M. (Eds.) Progress in Behavior Modification Vol. 3, New York: Academic Press, 1976.

Bowen, R. D. The relationship between agoraphobia and primary affective disorders. Canadian Journal of Psychiatry, 1979, 24, 317-322.

Bruch, M. A. Type of cognitive modeling, imitation of modeled tactics, and modification of test anxiety. Cognitive Therapy & Research, 1978, 2, 147-164.

Butler, P. E. The treatment of severe agoraphobia employing induced anger as an anxiety inhibitor: a case study. Journal of Behavior Therapy & Experimental Psychiatry, 1975, 6, 327-329.

Campbell, D. T., & Stanley, J. C. Experimental and quasi-experimental designs for research. Chicago: Rand McNally & Company, 1963.

Cautela, J. R. Covert modeling. Paper presented at the Fifth Annual Meeting of the Association for the Advancement of Behaviour Therapy, Washington, D. C. September 1971.

Cautela, J. R. Covert modeling. Psychotherapy: Theory, Research, Practice, 1976.

Cautela, J. R., Flannery, R. B. Jr., & Hanley, S. Covert modeling; an experimental test. Behavior Therapy, 1974, 5, 494-502.

Derogatis, L. R. SCL-90 Administration Scoring & Procedures Manual-1 for the R (revised) Version. Baltimore: John Hopkins University, 1977.

Diagnostic and Statistical Manual of Mental Disorders (3rd Edition). Washington: The American Psychiatric Association, 1980.

Edwards, D. W. Test-taking and stability of adjustment scales. Evaluation Quarterly, 1978, 2, 275-291.

Ellis, A. Reason and emotion in psychotherapy. New York: Lyle Stuart, 1962.

Ellis, A. A note on the treatment of agoraphobics with cognitive modification versus prolonged exposure in vivo. Behaviour Research and Therapy, 1979, 17, 162-164.

Emmelkamp, P. M. G. Self-observation versus flooding in the treatment of agoraphobia. Behaviour Research & Therapy, 1974, 12, 229-237.

Emmelkamp, P. M. G., & Emmelkamp-Benner, A. Effects of historically portrayed modeling and group treatment on self-observation: a comparison with agoraphobics. Behaviour Research & Therapy, 1975, 13, 135-139.

Emmelkamp, P. M. G., Kuipers, A. C. M., Eggeraat, J. B. Cognitive modification versus prolonged exposure in vivo; a comparison with agoraphobics as subjects. Behaviour Research & Therapy, 1978, 16, 33-41.

Emmelkamp, P. M. G., & Wessels, H. Flooding in imagination vs. Flooding in vivo: A comparison with agoraphobics. Behaviour Research & Therapy, 1975, 13, 7-15.

Everaerd, W. T. A. M., Rijken, H. M., Emmelkamp, P. M. G. A comparison of 'flooding' and 'successive approximation' in the treatment of agoraphobia. Behaviour Research & Therapy, 1973, 11, 105-117.

Foa, E. B., Jameson, J. S., Turner, R. M., Payne, L. L. Massed versus spaced exposure sessions in the treatment of agoraphobia. Behaviour Research & Therapy, 1980, 18, 333-338.

Gambrill, E. D., & Richey, C. A. An assertion inventory for use in assessment and research. Behavior Therapy, 1975, 6, 550-561.

Garfield, S. L. Research problems in clinical diagnosis. Journal of Consulting & Clinical Psychology, 1978, 46, 596-607.

Gelder, M. G., Bancroft, J. H. J., Gath, D. H., Johnston, D. W., Mathews, A. M., & Shaw, P. M. Specific and non-specific factors in behaviour therapy. British Journal of Psychiatry, 1973, 123, 445-462.

Glass, G. V., & Stanley, J. C. Statistical Methods in Education & Psychology. New Jersey: Prentice-Hall, Inc, 1970.

Goldstein, A. J., Serber, M., & Piaget, G. Induced anger as reciprocal inhibitor of fear. Journal of Behavior Therapy & Experimental Psychiatry, 1970, 1, 67-70.

Hafner, J., & Marks, I. M. Exposure in vivo of agoraphobics: the contributions of diazepam, group exposure and anxiety evocation. Psychological Medicine, 1976, 6, 71-88.

Hallam, R. S., & Hafner, R. J. Fears of phobic patients: factor analysis of self-report data. Behaviour Research & Therapy, 1978, 16, 1-6.

Hand, I., Lamontagne, Y., & Marks, I. M. Group exposure (flooding) in vivo for agoraphobics. British Journal of Psychiatry, 1974, 124, 588-602.

Hayes, S. C. The role of approach contingencies in phobic behavior. Behavior Therapy, 1976, 7, 28-36.

Hogarty, G. E., & Katz, M. M. Norms of adjustment and social behavior. Archives of General Psychiatry, 1971, 25, 470-480.

Hogarty, G. E., Katz, M. M., & Lowery, H. A. Indentifying candidates from a normal population for a community mental health program. In Monroe, R. (Ed.) Psychiatric Epidemiology & Mental Health Planning. Washington, D.C.: American Psychiatric Association Research Report No. 22, 1967, 219-234.

Kantor, J. S., Zitrin, C. M., & Zeldis, S. M. Mitral value prolapse syndrome in agoraphobic patients. American Journal of Psychiatry, 1980, 137, 467-469.

Katz, M. M., & Lyerly, S. B. Methods for measuring adjustment and social behavior in the community: 1. Rationale, description and discriminative validity and scale development. Psychological Reports, (Monograph Supplement 4), 1963, 13, 503-535.

Kazdin, A. E. Covert modeling and the reduction of avoidance behavior. Journal of Abnormal Psychology, 1973, 81, 87-95.

Kazdin, A. E. Covert modeling, model similarity, and the reduction of avoidance behavior. Behavior Therapy, 1974a, 5, 325-340.

Kazdin, A. E. The effect of model identity and fear relevant similarity on covert modeling. Behavior Therapy, 1974b, 5, 624-635.

Kazdin, A. E. Comparative effects of some variations of covert modeling. Journal of Behavior Therapy & Experimental Psychiatry, 1974c, 5, 225-231.

Kazdin, A. E. Effects of covert modeling and model reinforcement on assertive behavior. Journal of Abnormal Psychology, 1974d, 83, 240-252.

Kazdin, A. E. Covert modeling, imagery assessment, & assertive behavior. Journal of Consulting & Clinical Psychology, 1975, 43, 716-724.

Kazdin, A. E. Assessment of imagery during covert modeling of assertive behavior. Journal of Behavior Therapy & Experimental Psychiatry, 1976, 7, 213-219.

Kazdin, A. E. Research design in clinical psychology. New York: Harper & Row, 1980.

Lang, P. J. The mechanics of desensitization and the laboratory study of human fear. In C. M. Franks (Ed.) Behavior Therapy: Appraisal & Status, New York: McGraw-

Hill, 1969.

Lazarus, A., & Abramovitz, A. The use of 'emotive imagery' in the treatment of children's phobias. Journal of Mental Science, 1962, 108, 109-195.

Little, J. M. The relative contributions of thought-stopping and covert assertion in the treatment of speech anxiety. (Doctoral dissertation. University of Maryland, 1976). Dissertation Abstracts International, order no. 77-22, 521.

Lowe, L. E. The comparative effectiveness of ideal self, ideal person, and real self as models in covert modeling procedures. (Doctoral dissertation, Boston College 1978). Dissertation Abstracts International, order no. 7813783.

Marks, I. M. Fears and phobias. New York: Academic Press, 1969.

Marks, I. M. Perspective on flooding. Seminars in Psychiatry, 1972, 4, 129-138.

Marks, I. M., Boulougouris, J., & Marset, P. Flooding versus desensitization in the treatment of phobic patients: a crossover study. British Journal of Psychiatry, 1971, 119, 353-375.

Marks, I. M., & Herst, E. R. A survey of 1200 agoraphobics in Britain. Social Psychiatry, 1970, 5, 16-24.

Marks, I. M., & Mathews, A. M. Brief standard self-rating for phobic patients. Behaviour Research & Therapy, 1979, 17, 263-267.

Marshall, W. L., Gauthier, J., & Gordon, A. The current status of flooding therapy. In: Progress in Behavior Modification Vol. 7. Eds.: Hersen, M., Eisler, R. M., & Miller, P. M. New York: Academic Press, 1979.

Marzillier, J. Cognitive therapy & behavioural practice. Behaviour Research & Therapy, 1980, 18, 249-258.

Mathews, A. M., Gelder, M. G., & Johnston, D. W. Agoraphobia, Nature and Treatment. New York: The Guilford Press, 1981.

Mathews, A., & Rezin, V. Treatment of dental fears by imaginal flooding and rehearsal of coping behavior. Behavior Research & Therapy, 1977, 15, 321-328.

Mavissakalian, M., & Barlow, D. Phobia: psychological & pharmacological treatment. New York: Guilford Press, 1981.

Meichenbaum, D. Examination of model characteristics in

reducing avoidance behavior. Journal of Personality & Social Psychology, 1971, 17, 298-307.

Rachman, S. Clinical applications of observational learning, imitation and modeling. Behavior Therapy, 1972, 3, 379-397.

Rachman, S., & Hodgson, R. I. Synchrony and desynchrony in fear and avoidance. Behaviour Research & Therapy, 1974, 12, 311-318.

Rimm, D. C. Thought stopping and covert assertion in the treatment of phobias. Journal of Consulting & Clinical Psychology, 1973, 41, 466-467.

Rimm, D. C., & Masters, J. C. Behavior Therapy: Techniques & Empirical Findings. New York: Academic Press, 1979.

Rimm, D. C., Saunders, W. D., & Westel, W. Thought stopping and covert assertion in the treatment of snake phobics. Journal of Consulting & Clinical Psychology, 1975, 43, 92-93.

Sarason, I. G. Test anxiety and cognitive modeling. Journal of Personality & Social Psychology, 1973, 28, 58-61.

Roth, M., Garside, R. S., & Gurney, C. Clinical statistical enquiries into the classification of anxiety states and depressive disorders. In: Proceedings of Leeds Symposium on Behavioural Disorders. London: May & Baker, 1965.

Stern, R., & Marks, I. Brief and prolonged flooding. Archives of General Psychiatry, 1973, 28, 270-276.

Teasdale, J. D., Walsh, P. A., Lancashire, M., & Mathews, A. M. Group exposure for agoraphobics: a replication study. British Journal of Psychiatry, 1977, 130, 186-193.

Thase, M. E., & Moss, M. K. The relative efficacy of covert modeling procedures and guided participant modeling on the reduction of avoidance behavior. Journal of Behavior Therapy & Experimental Psychiatry, 1976, 7, 7-12.

Waskow, I. E., & Parloff, M. B. Psychotherapy change measures. Rockville, Md: National Institute of Mental Health, 1975.

Watson, J. P., Mullett, G. E., & Pillay, H. The effects of prolonged exposure to phobic situations upon agoraphobic patients treated in groups. Behaviour Research & Therapy, 1973, 11, 531-547.

Wesphal, C. Die agoraphobie: eine neuropathische erscheinung. Archiv fur Psychiatrie und Nervenkrankheiten, 1871, 3, 138-161.

Wolpe, J. Psychotherapy by reciprocal inhibition. Stanford: Stanford University Press, 1958.

Wolpe, J. The practice of behavior therapy. Oxford: Pergamon Press, 1969.

Wolpe, J. The practice of behavior therapy. New York: Pergamon Press, 1973.

Appendix A.

Therapist's Manual

COVERT PRACTICE OF ASSERTIVENESS GROUP (FL/A group)

Session 1

TIME (Mins)

1. Introduction and welcome

0--10 Members are introduced to each other and welcomed to the programme. Advantages of group therapy are outlined. A broad rationale is given for exposure therapy: that research has shown repeated prolonged exposure to various anxiety-provoking situations to decrease anxiety in these situations. Group exposure sessions will provide proof to group-members that dreaded events e.g. fainting, screaming, heart failure, etc., almost never happen even when anxiety is high and members remain in the difficult situations. It is stressed that they will receive lots of support from the therapist and other group members and that this approach to therapy has been found to be successful with many agoraphobics. It is explained that therapy is also to include techniques to help arrest the escalation of anxiety, and imaginal practice to extend the range and frequency of exposure.

10--30 2. Covert assertiveness (CA) training

(a) Group members, with the assistance of the therapist generate assertive statements which would be appropriate for them to use in agoraphobic situations. Examples:

"I refuse to get anxious"
"I can do it too"
"I'll go in and show them"
"I'm not going to get hot"

When 8--10 such statements have been suggested by the group, each member on a card writes 3 of them that he or she is most comfortable using.

(b) The selected statements are rehearsed aloud by each member in turn with the therapist modeling and encouraging assertive expression "I'd like you to try and say it with feeling in a convincing and insistent way like this: ...". The statements are repeated by members until they are

expressed in an assertive manner.

(c) Each member covertly rehearses the statements selected after the therapist has described three agoraphobic scenes:

boarding a bus
entering a department store
sitting in crowded sports stadium

(d) Therapists remind group members that even though statements are expressed inwardly and not aloud, it is important to express them "with feeling" and assertively. All statements selected by each member should be used in any one day, rather than using any one of them repeatedly.

(e) Assertive statemtents should be used during the group exposure sessions and in agoraphobic situations in real life whenever the start of the rise of anxiety was felt.

30--60 3. Covert modeling (CM) with an assertive model

(a) Introduction & rationale .

"The procedure we are going to use is based on a number of experiments in which people learn new habits by observing other people in various situations. The way this is usually done is that people actually observe others doing things. What I am going to do is to vary this procedure somewhat by having you observe certain scenes in imagination rather than having you directly observe a movie or actual interaction among people. I am going to use scenes that I think will help you change the behaviour we agreed needs changing. In a minute I'll ask you to close your eyes and try to imagine, as clearly as possible, that you are observing a certain situation. Try to use all the senses needed for a particular situation e.g. try to hear a voice or see a person very clearly. After I describe the scene I will ask you some questions concerning your feelings about the scene and how clearly you imagined it."

(b) Warm up

To facilitate the generation of reasonably

clear imagined scenes, members are asked to close their eyes and to imagine the foods they ate and drank at their most recent meal or snack. The colours, textures and aromas of the foods should be referred to by therapists as important to recall and imagine.

(c) Covert modeling practice

The therapist writes on the board a list of problem situations extracted from the fear questionnaires and subject questionnaires of this particular group. Each group member chooses five scenes he would like to work on and writes them on a card.

Consecutively members are asked to imagine these five scenes in which a coping, same-sexed, and similar-aged model:

(i) initially approached an anxiety-provoking situation in a hesitant, anxious way
(ii) used a CA statement
(iii) and then is rewarded by being able to complete the action and by feeling pleased and elated.

An example of a script for a scene follows:

Preamble:

"Please sit back and try to relax. Try to imagine the scene I am going to describe. Imagine you are really there. In addition to seeing what I describe try to use your other senses as well. If, in the scene you are sitting in a chair, for example, try to imagine that you can feel the chair against your body. If you are in a forest, try to imagine you can hear birds chirping and leaves rustling. Remember, the main point is that you are actually experiencing everything. Ready? Good. Now please close your eyes and try to relax."

Scene presentation:

"I'd like you to imagine a model you would like to use in all the modeling scenes I'm going to describe. The model should be approximately the same age as you

are and the same sex as you. As you sit here, try to imagine such a person. See what the person is wearing and what the colour of the clothes are.

"You can see your model standing at a bus-stop. He or she is standing on the sidewalk waiting for the bus to arrive. You can hear the sound of passing cars and see them go by. Your model seems to be quite worried and anxious because he or she has a tense, nervous expression on the face. Finally the bus arrives. You can hear the sound of the bus doors opening and you can see passengers getting off. Your model hesitates to board the bus. Then she says inwardly "I refuse to get anxious" (her covert assertion statement), with great feeling and intensity. You can now see your model's foot on the step of the bus as she boards it. As your model pays the driver, you can see him or her smiling. Your model is looking pleased and relaxed as he or she sits down on the bus. You can see no trace of anxiety. (PAUSE) Now open your eyes."

(d) Homework

Members are given a homework record (HR) sheet listing the five scenes and are asked to have two practice sesions of CM each of about 10 minutes each day. At each homework session their chosen five scenes are imagined twice. Homework sessions should commence on the afternoon of the first day of group treatment and continue until 30 days after the third and final group session CM practice times should by recorded on the HR sheets.

4. Group exposure

60--70 (i) Therapists should not mention the word "flooding" in their presentation of rationales, or at any time in therapy. "Flooding" may, for some subjects have adverse reactions either through previous therapy or heresay, or reading. It is suggested that the phrase "group exposure" be used in its place.

(ii) Therapist explains that research has shown that repeated, prolonged exposure (something of the order of 2 hours) to a

feared situation has brought very effective and rapid relief from anxiety for many agoraphobics.

When the group goes on a group exposure outing, some anxiety is to be expected by group members. It is important to stay in the anxiety-provoking situation. The anxiety will subside after a while even though a group member may still be present in the situation. This is the key to successful treatment. While experiencing the anxiety , members should not engage in any physical avoidance (i.e. leaving the situation) or mental avoidance (e.g. thinking of other thoughts to distract attention, pretending to be elsewhere). Members should rather concentrate on describing to themselves their surroundings, bodily feelings, and mental events. (Therapist to model this). The criterion for moving from one phobic situation to the next is to be a decrease of anxiety rather than its absolute level. Members would thus learn that peak anxiety does not last very long, could be tolerated and, after a few successful exercises they would gain confidence in these previously anxiety-producing situations.

(iii) Group members should remember while they are experiencing "group exposure" that there are other group members who are in the same situation.

(iv) When members feel anxiety <u>beginning</u> to rise, they should "inwardly" use their assertion statements.

(v) Group members are told that, during group exposure sessions, a therapist will remain at a specified location nearby members. Members should aim at experiencing the exposure alone; should resist the urge to return to the therapist, and should only return to the therapist if the situation became intolerable.

70--90 Members walk individualy to the bus stop (about 25 yards apart). The group travels by bus to a nearby shopping centre (Oakridge). Members and therapists are to sit separately on the bus (i.e. not grouped together).

90--210 Two hours of continuous exposure at a department store (Woodwards) in the Oakridge Shopping Centre (as described in (v)).

210--230 Return to clinic by bus and walk individually (about 25 yards apart) back to the clinic.

5. Discussion

230--270 Group discussion to share experiences; to discuss use of CA; answer questions; and discuss homework assignments. Group members are advised that it is important for them to extend the range and duration of their unaccompanied excursions from their homes starting that afternoon. Each day there should be some practice in doing things which were difficult for them. The level of difficulty was to be left up to the individual to determine for himself or herself. Each member is then asked to describe one task to be done that afternoon and another to be done on the following day. The therapist should review each task with the group member in order to operationalize and pinpoint goals e.g. walk alone to supermarket along Main Street; buy at least ten items; check out through regular cashier (not express lane); walk home along High Road alone.

Sessions 2 & 3

0--30 1. Discussion of homework

30--60 2. CA and CM practice.

60--230 3. Group exposure: session 2 to Van Dusen Gardens (a large public park)
session 3 to Pacific Centre Mall (the busiest downtown underground shopping mall)

230--270 4. Group discussion.

Therapist's Manual

FLOODING GROUP (FL group)

Session 1

TIME (Mins)

1. Introduction and welcome

0--10 Members are introduced to each other and welcomed to the programme. Advantages of group therapy are outlined. A broad rationale is given for exposure therapy: thatresearch has shown repeated prolonged exposure to various anxiety-provoking situations to decrease anxiety in these situations. Group exposure sessions will provide proof to group-members that dreaded events e.g. fainting, screaming, heart failure, etc., almost never happen even when anxiety is high and members remain in the difficult situations. It is stressed that they will receive lots of support from the therapist and other group members and that this approach to therapy has been found to be successful with many agoraphobics. It is explained that therapy is also to include imaginal practice to extend the range and frequency of exposure.

10--30 2. Group discussion of members' histories of agoraphobia

It is explained that it would be useful to discuss the origins and early episodes of members' agoraphobic problems. The therapist should not attempt to interpret or provide insight to these episodes but should rather act as chairperson to regulate the discussion.

The therapist should make notes and members should be addressed individually in rotation for details of the episodes.

30--60 3. Scene presentation

(a) "The procedure we are going to use is based on a number of experiments in which people learn new habits by observing various situations. The way this is usually done is that people actually experience these situations. We are going to vary this procedure somewhat by having you directly observe a movie or actual interaction among people. I am going to use scenes that I think will help you change the behavior we

agreed needs changing. In a minute, I'll ask you to close your eyes, and try to imagine, as clearly as possible, that you are observing a certain situation. Try to use all the senses needed for the particular situation, e.g. try to actually hear a voice or see a person very clearly. After I describe the scene, I will ask you some questions concerning your feelings about the scene and how clearly you imagined it."

(b) Warm-up

To facilitate the generation of reasonably clear imagined scenes, members are asked to close their eyes and to imagine the foods they ate and drank at their most recent meal or snack. The colours, textures and aromas of the foods should be referred to by therapists as important to recall and imagine.

(c) Presentation of scenes

Members are asked to imagine five different agoraphobic scenes. No mention should be made by the therapist of the presence of either a model or the member himself (or herself) actually being an element in these imagined scenes. The therapist writes on the board a list of problem situations extracted from the fear questionnaire and subject questionnaires of this particular group. Each group member chooses five scenes he would like to work and writes them on a card.

An example of a script for a scene follows:

Preamble:

"Please sit back and try to relax. Try to imagine the scene I am going to describe. Imagine you are really there. In addition to seeing what I describe try to use your other senses as well. If, in the scene you are sitting in a chair, for example, try to imagine that you can feel the chair against your body. If you are in a forest, try to imagine you can hear birds chirping and leaves rustling. Remember, the main point is that you are actually experiencing everything. Ready? Good. Now

please close your eyes and try to relax."

Scene presentation:

"Imagine the scene at a bus-stop. Riding on a bus is an anxiety-provoking situation for many agoraphobics to be in. Imagine the bus arriving at a bus stop. You can hear the sound of the doors opening and, as you think of riding in a bus alone, far away from your home, you can feel your anxiety rising. The bus is crowded. Picture the crush of people -- some sitting, some standing. As the bus pulls away your anxiety continues to rise. Now hold that scene in your mind for another minute or so (PAUSE) Now open your eyes."

Scripts incorporating similar elements are used for the other scenes. Each scene is presented once during the group session.

(d) Homework

Members are given a homework record (HR) sheet listing the five scenes and are asked to have two imagery sessions each of about 10 minutes each day. At each homework session their chosen five scenes are imagined twice. Homework sessions should commence on the afternoon of the first day of treatment and continue until 30 days after the third and final group session. Imagery practice times should be recorded on the HR sheets. In addition to this subjects should try to extend the range and duration of solitary excursions. Each day there should be some practice. These should be recorded on the behavioural diary.

4. Group exposure

60--70 (i) Therapists should not mention the word "flooding" in their presentation of rationales, or at any time in therapy. "Flooding" may, for some subjects have adverse reactions either through previous therapy, or heresay, or reading. It is suggested that the phrase "group exposure" be used in its place.

(ii) Therapist explains that research has shown that repeated, prolonged exposure (something of the order of 2 hours) to a

feared situation has brought very effective and rapid relief from anxiety for many agoraphobics. When the group goes on a group exposure outing, some anxiety is to be expected by group members. It is important to stay in the anxiety-provoking situation. The anxiety will subside after a while even though a group member may still be present in the situation. This is the key to successful treatment. While experiencing the anxiety, members should not engage in any physical avoidance (i.e. , leaving the situation) or mental avoidance (e.g. , thinking of other thoughts to distract attention, pretending to be elsewhere). Members should rather concentrate on describing to themselves their surroundings, bodily feelings, and mental events. (Therapists should model this). The criterion for moving from one phobic situation to the next is to be a decrease of anxiety rather than its absolute level. Members would thus learn that peak anxiety does not last very long; could be tolerated and, after a few successful exercises they would gain confidence in these previously anxiety-producing situations.

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(iv) Group members are told that, during group exposure sessions, therapists will remain at a specified location nearby members Members should aim at experiencing the exposure alond; should resist the urge to return to the therapist, and should only return to the therapist if the situation became intolerable.

70--90 Members walk individually to the bus stop (about 25 yards apart). The group travels by bus to a nearby shopping centre (Oakridge). Members and therapists are to sit separately on the bus (i.e. not grouped together).

90--210 Two hours of continuous exposure at a department store (Woodwards) in the Oakridge Shopping Centre (as described in (v)).

210--230 Return to clinic by bus, and walk individually (about 25 yards apart) back to the clinic.

5. Discussion

230--270 Group discussion to share experiences; to discuss homework assignments and to answer questions. Group members are advised that it is important for them to extend the range and duration of their unaccompanied excursions from their homes starting that afternoon. Each day there should be some practice in doing things which were difficult for them. The level of difficulty was to be left up to the individual to determine for himself or herself. Each member is then asked to describe one task to be done that afternoon and another to be done on the following day. The therapist should review each task with the group member in order to operationalize and pinpoint goals e.g. walk alone to supermarket along Main Street; buy at least ten items; check out through regular cashier (not express lane); walk home along High Road alone.

Sessions 2 & 3

0--10 1. Discussion of homework.

10--30 2. Continuation of discussion of member's experiences in agoraphobic situations.

30--60 3. Scene presentation practice.

60--230 4. Group exposure: session 2 to Van Dusen Gardens (a large public park)
session 3 to Pacific Centre Mall (a busy downtown underground shopping mall)

230--250 5. Group discussion.

APPENDIX B

Behavioural Diary

Name:

Dates: From for 7 days.

DATE	TIMES		DESTINATION	TRANSPORT
	Leaving Home	Returning Home		Check one (✓)
	Time left home	Time left destination	Description	Walk
	Time reached destination	Time reached home		Car
	Total mins.	Total mins.	Distance from home(in yards, blocks or miles)	Bus
	Anxiety rating	Anxiety Rating		Bicycle
	Were you accompanied?	Were you accompanied?		Other (describe)

APPENDIX C

Subject Questionnaire

Name _____ Male /__/, Female /__/ Date _____
Day Month Year

Address _____

_____

_____ Postal Code: /__/__/__/__/__/__/

Phone Numbers: Home _____ Work _____ Contact _____

Age: _____ years; Marital status _____

For how long have you been agoraphobic (approximately)? ____years ____months

Which situations do you find particular difficulty in handling?

_____

_____

_____

_____

_____

_____

Would you please name a person below whom we can ask to answer a series of simple questions by rating your social, work & leisure activities on a questionnaire. This will be completed three times:

1. before treatment
2. 30 days after completion of treatment
3. 90 days after completion of treatment

A. Spouse or living partner (first priority)

Name: _____ Address: (If same as above write "same")

_____

Phone: Home _____ Work: _____ Postal Code /__/__/__/__/__/__/

APPENDIX C (continued)

B. Parent, brother, sister, or good friend (if first priority not available)

Relationship to you _____

Name: _____ Address: (If same as above write "same")

_____

Phone: Home _____ Work _____ Postal Code: / / / / / / /

Education:

Grade completed in high school? Grade _____

Number of years of education after high school? _____ years

Medication:

Are you now taking any medication?

Name of drug: _____

Dosage: _____

Signed _____

Date _____

APPENDIX D

CES Scale

Name: _____ Date: _____

Please rate the five questions below by choosing a number from the scale which shows how you feel about the question asked. Then write the number in the box opposite the question.

0	I have no confidence in this.	/This is not logical.
1		
2	I am somewhat confident about this.	/This is somewhat logical.
3		
4	I am confident about this.	/This seems logical.
5		
6	I am very confident indeed about this.	/This seems very logical.
7		
8	I have every confidence for total success in this.	/This makes perfect sense-extremely logical.

A. How logical does this type of treatment seem to you? /___/

B. How confident are you that this treatment would be successful in eliminating your agoraphobia? /___/

C. How confident would you be in recommending this treatment to a friend who was extremely anxious in agoraphobic situations? /___/

D. How willing are you to undergo such treatment for agoraphobia? /___/

E. How successful do you feel this treatment would be in decreasing a fear different to agoraphobia; for example, strong anxiety about talking to strangers or about being criticized (for example)? /___/

APPENDIX E

Imagery Assessment Questionnaire (IAQ)

Name _____ Date _____

As part of your therapy you have been asked to imagine various scenes. Please indicate below how these imagined scenes appeared to you:

1. Was a person who acted as a model displaying reactions to the various situations present in these scenes?

   Yes /__/
   No /__/

   If your reply is "No", please skip questions 2, 3 & 4 and go on to Question 5.

2. If a model was present in your imagined scene, was the model:

   the same sex as you ? /__/
   the opposite sex to you ? /__/

   What was the approximate age of the model?

   - much older than you (more than 10 years older) /__/
   - about the same age as you (not more than 10 years older nor 10 years younger than you) /__/
   - much younger than you (more than 10 years younger) /__/

   Was the model you imagined: yourself ? /__/
   someone else ? /__/

3. If a model was present, please describe how the model handled the tasks you imagined:

   - model was initially anxious but ultimately coped with the situation /__/
   - model was initially confident and relaxed and had no problems in dealing with the situation /__/

4. If a model was present did the model say anything to himself or herself when confronting the difficult situation?

   Yes /__/
   No /__/

   If your answer is "yes", please give example(s) of what the model said:

   _____

   _____

   _____

APPENDIX E (continued)

5. How clear was the image you imagined during the scenes?

not at all clear	0	/__/
	1	/__/
reasonably clear	2	/__/
	3	/__/
very clear	4	/__/

6. How much anxiety did you experience while imagining these scenes? (If "100" is the worst anxiety you have ever experienced, or can imagine experiencing; and "0" represents the state of being absolutely calm, how would you rate the peak anxiety you felt while imagining the scenes?)

Rating /____/

7. When you imagined these scenes, how often were you able to imagine them exactly as described by your therapist?

never	0	/__/
seldom	1	/__/
about half the time	2	/__/
nearly always	3	/__/
always	4	/__/

APPENDIX F

Subjective Anxiety Scale (SAS)

Name _____ Date _____

A. Think of the worst anxiety you have ever experienced, or can imagine experiencing, and assign to this the number 100.

B. Now think of the state of being absolutely calm and call this zero.

C. Now you have a scale of anxiety.

D. On this scale how **would you rate the peak (highest) anxiety you felt during our trip this morning ?** /____/

APPENDIX G

Name.....

Date.....

Homework Record (HR)

You should have two scene imagination sessions every day starting from the first day of therapy and continuing for 35 days. At each session go through your list of five scenes twice in your imagination.

Please record your practice sessions below. If you have skipped a session, record a "0" under Time.

Day	Date		First Practice Time (in minutes)	Second Practice Time (in minutes)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
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34				
35				

APPENDIX H

Consent Form

We are conducting a research programme at Shaughnessy Hospital to examine different treatments for people with problems similar to yours. Treatment involves group visits to various nearby locations and in addition training in the use of some psychological skills that might help you control your problem. We are evaluating in our research the value of these skills, but the basic treatment programme has been extensively used and found to be effective. Participants are free to withdraw from the programme at any stage. If you choose to withdraw you will receive the regular treatment for agoraphobia at Shaughnessy Hospital.

Treatment Programme:

Therapy is to be conducted in small groups consisting of about seven members. These groups meet with therapists for three mornings in one week (Monday, Wednesday & Friday) for about 3½ hours each morning. During these sessions you will be introduced to the therapy techniques, followed by group visits to nearby locations such as Oakridge Shopping Centre and a downtown shopping mall.

The atmosphere will be supportive throughout and it has proven helpful for many people with agoraphobia to get to know and to work in small groups with others who have the same problem.

After the week of intensive therapy you will be encouraged to do homework assignments at your own pace. These are excursions from your home on your own, but the nature and extent of these will depend on you.

Participation:

You will first be given an individual interview in which background information relating to your particular circumstances will be discussed and some questionnaires completed by you. If you qualify for the programme and agree to participate, you will be assigned to one of three treatment groups. Because of scheduling of therapists' time, your therapy might commence at any time from about 2 weeks to 8 weeks from now. If you choose not to participate in this programme or if you do not qualify for this programme, the regular treatment facilities at Shaughnessy Hospital will be available to you.

There is no charge for participation but persons who consent to participate will be expected to attend all three sessions of the group to which they are assigned and to be available to complete all questionnaires.

Questionnaires:

During the week of intensive therapy, you will be asked to complete some questionnaires. Also, 1 month and 3 months after treatment you will be asked to complete some questionnaires and to mail these to us.

You are free to refuse to answer any questions if you so wish. You will be asked to nominate someone who knows you well and will be prepared to complete a questionnaire which will be mailed to them, taking about 20 minutes to complete, and involving questions about your activities at work, at home, and during leisure. These will be completed first before treatment commences, then at 1 month and 3 months after treatment ends.

All data will be treated in strictest confidence.

CONSENT

I have read the preceding description of the programme. I have had all my questions answered to my satisfaction and I do hereby consent to participate in the programme.

Signature _____ Date _____

Witness's Signature _____