#### DOCUMENT RESUME

ED 268 454 CG 019 013

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TITLE Follow-Up Research on Agoraphobics.

PUB DATE Nov 85

NOTE llp.; Paper presented at the Annual Meeting of the

Association for Advancement of Behavior Therapy

(Houston, TX, November 14-17, 1985).

PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS \*Anxiety; Counseling Effectiveness; Counseling

Techniques; \*Holistic Approach; Life Style;

Maintenance; \*Marriage Counseling; \*Problem Solving;

\*Relaxation Training

IDENTIFIERS \*Agoraphobia; \*Relapse

#### **ABSTRACT**

In vivo exposure is the most commonly used and generally the most effective behavioral treatment for agoraphobia. Follow-up studies are difficult to interpret because additional treatment does not necessarily indicate relapse and non-treatment does not necessarily indicate non-relapse. Relapse rates are difficult to estimate because of lack of consensus on the definition of relapse. Relapse factors include reliance on anti-depressant medication and such measures of personality and psychopathology as marital status, locus of control, social anxiety, depression, and early compliance with treatment. Other variables are work satisfaction, negative thinking, socioeconomic status, and frequency of panic attacks. Maintenance of agoraphobics has been shown to be enhanced through the use of the following techniques: (1) marital therapy for disstressed couples; (2) maintenance homework including exposure and applied relaxation; and (3) panic reduction, especially methods not using medication such as reducing marital conflict and increasing problem solving skills. Finally, agoraphobics need to be encouraged to adopt a healthy life style and to be self-nurturing. (ABL)



# Follow-up Research on Agoraphobics

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Paper presented at the meeting of the Association for Advancement of Behavior Therapy, Houston, November 1985. In N. Jacobson (Chair). Predicting maintenance and relapse following behavior therapy: Clinical implications.

In vivo exposure is the most commonly used and generally the most effective behavioral treatment for agoraphobia. studies show that, at posttest, 60-70% of clients who complete a course of exposure treatment improve to a substantial degree (Jansson & Ost, 1982). Four long term follow-up studies have now been conducted using agoraphobics treated with exposure. Followup ranged from 4 to 9 years. Although most of the researchers used self-report techniques (Emmelkamp & Kuipers, 1979; McPherson et al. 1980; Munby & Johnston, 1980), in one study behavioral avoidance tests were also conducted (Burns et al., 1983). On the whole posttest gains are maintained at follow-up on both selfreport and behavioral measures, as well as on assessor's ratings. These findings are extremely positive, but there are some difficulties in interpreting them.

Frequently clients seek more treatment after the end of the research trial in question. It is difficult, therefore, to know where they would be at follow-up, had if not been for this additional treatment. We cannot assume that seeking additional therapy means the clients have relapsed, for they may simply want to improve more. The typical status at the end of exposure trials is improved, but still symptomatic. Nor can we assume that if clients have not sought additional therapy, they have not relapsed. Treatment may be unavailable, or clients may not be able to avail themselves of it because of financial limitations or the travel restrictions caused by their phobias.

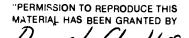
The study by Munby and Johnston is most instructive because they were able to follow-up an astonishing 95% of their sample. 53% of the clients had received some additional treatment, and 65% were on medication for their anxiety problems. 39% of the sample reported having relapses that lasted at least 1 month, although by the time of follow-up, on the whole, the sample remained at post test status indicating that they had recovered from these relapses, whether through their own efforts or additional treatment, we don't know. Thus our hopeful follow-up statistics may belie a fluctuating course of symptom severity, and far more detailed research is required.

#### Factors in Relapse

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Few studies have presented statistics on the number of clients who may be considered to be relapsed at follow-up. The best estimate I can make is from what data have been reported is that about 10% of those who initially improve, relapse. Moreover, researchers rarely define what they mean by relapsed. Do we take this to mean back at pretreatment status, or minimally worse than at posttest? We proceed on murky ground here. In addition the number of relapsers in one study is bound to be quite small, given the small sample size in most clinical research. Hence it becomes very difficult to identify the factors involved in such clients' relapse. Multicenter trials would be of great benefit in this area of research. Let's now turn to a consideration of what some of these factors may be, at least as far as we can tell at present.

## 1. Antidepressant medication

Overall comparisons of clients treated with drugs plus behavior therapy vs. placebo plus behavior therapy demonstrate a higher rate of relapse for clients who have taken the active medication (Telch, Tearnan, & Taylor, 1983). These differences, while consistent, are generally not statistically significant with small samples. For example, Zitrin et al. (1980) at 1 year follow-up found 27% of clients treated with imipramine plus exposure to be relapsed vs. 6% of those who received exposure plus placebo. These differences in relapse rate may not be found in studies where there was no significant advantage gained from the use of an antidepressant (e.g., Cohen, Monteiro, & Marks, 1984). Clinical researchers are in general agreement that clients treated with medication may have learned no other coping strategies for dealing with their anxiety, and thus may revert to avoidance when faced with a resurgence of panic attacks.

## 2. Measures of personality and psychopathology.

Factors such as locus of control, social anxiety, duration of agoraphobia, depression, marital status, and early compliance with treatment have been examined for their relationship with four year follow-up status with statistically insignificant results (e.g., Emmelkamp & Kuipers, 1979) despite the fact that some of these factors, for example, depression, social anxiety, and frequency of panic have been found to correlate with posttest status (reviewed by Chambless et al., in press). Of course, we have no data showing us that our measures are reliable over a 4 year period, nor are we likely to obtain test-retest reliability over such an interval.

Furthermore, we cannot assume that pretreatment factors that affect initial response to treatment will necessarily be meaningful in the follow-up period. Let's use the example of depression, often found to predict poor treatment response at posttest (e.g., Zitrin et al, 1980). Depressed clients may fail



in treatment for a variety of reasons. Nevertheless, exposure is generally an effective treatment for depression among agoraphobics because the depression is most often secondary to the phobic restrictions. Consequently a client who was depressed pretreatment, but who improves on phobias, is probably not going to be depressed at posttest. It is unlikely, therefore that pretreatment depression status of an improved client will predict follow-up status. What is more important to know is whether the client again becomes depressed during the follow-up period, and whether such depressive episodes are related to increased severity of phobia. In my experience this is the case, but our present designs have not been set up to answer such questions.

Marital satisfaction has been found to be associated with follow-up status in several studies (Bland & Hallam, 1981; Milton & Hafr. 1979; Monteiro, Marks, & Ramm, 1985). Although clients with unhappy marriages generally fare no worse in treatment at posttest, over the follow-up period differences begin to emerge which become statistically significant at 3 months follow-up in Bland and Hallam's study (.6), and remain so at 2 years in the atudy by Monteiro, Marks and Ramm. Monteiro et al. found therapists' ratings of marital problems to be a more sensitive measure than were clients' questionnaire responses. In no doubt a related finding, Monteiro et al. found that agoraphobics who had intercourse at least once weekly fared better at 2 year follow-up than those who were less sexually active (!). Further noting that those with higher work satisfaction at pretest fared better at follow-up, Monteiro et al. concluded that generally healthier clients were more likely to maintain or enhance their gains at follow-up.

## 3. Temple Program Study

In preparation for this paper we analyzed the status of 46 clients who completed a 2 week intensive treatment program at the Agoraphobia and Anxiety Program of Temple University Medical School (see Chambless et al., in press). This program differs from the studies I have previously described in that clients receive not only approximately 27 hours of exposure but also an eclectic blend of education, Gestalt group therapy, and brief marital therapy. After the end of the 2-week program, clients are free to continue in weekly as-needed exposure treatment or individual or marital therapy. The majority (84%) of clients continue in weekly nonexposure treatment for 3 months - 1 year. 48% receive additional exposure treatment, an average of 8 more sessions. Our data, therefore, do not represent a pure follow-up with no additional treatment, but, as we have already seen, follow-ups like that are rsre beasts.

I won't go into the outcome extensively here, but will just say that significant improvement occurs on a wide range of measures of phobia, depression, anxiety, social anxiety, panic



frequency, and so forth. On the whole improvement continued between the intensive treatment and 1 year follow-up. In particular significant improvement continued on Avoidance Alone on the Mobility Inventory (Chambless et al., 1985). This is a measure of 26 situations agoraphobics may avoid when alone. Mean percentage improvement was 35.6% at posttest and 50.8% at 1 year follow-up. At posttest we exmained percentage improvement on Avoidance Alone and assigned clients to categories of not improved, somewhat improved, and so on. If clients fell from one category to another, they were considered relapsers.

At posttest, 61% of clients had improved at least somewhat and were consequently eligible, if you like, for relapse. clients (14.29%) of these were found to have partially relapsed: 2 went from moderately improved to somewhat improved, one from highly improved to moderately improved, and one from somewhat improved to not improved. Even this last client retained some improvement (21%) compared to pretest. No client changed by more than one category. Two of these four were from out of town. fact both were from isolated areas of Appalachia and could not get further treatment once returning to their hometowns. other two continued in treatment and showed a fluctuating course: sometimes almost symptom free, and other times moderately symptomatic. Although not included in this data set, we have had other experiences with relapses in out of town clients we've treated; yet others, however, have done well, frequently continuing to be in therapy in the hometown area. In both cases the Appalachian women took part in telephone follow-up sessions for homework assignments and support. These efforts did not appear to be adequate.

Most of the variance at follow-up was not due to relapse, but to degrees of improvement. We examined the relationships of demographic variables and measures of personality and psychopathology with posttest and follow-up scatus by correlating these variables with percent improvement. At posttest clients who rated their phobias as more disabling and disturbing on the Fear Questionnaire and those who had higher Agoraphobia Factor scores on the Fear Questionnaire were found to have improved less (r's of -.27, n = 80 and -.22, n = 86). This is a unique finding, however, it may reflect the statistical power in our sample size, for at posttest we had samples of over 80, far larger than the ordinary outcome study. These differences were eliminated, however, at follow-up, although the differences are still in the same direction. Similarly, one of the pretest variables that reflects fear of fear, the Body Sensations Questionnaire (r = -.40, n = 23, p < .05) predicted posttest but not follow-up status. This questionnaire indicates fear of the body sensations that are associated with panic such as rapid heart beat, dizziness, and so forth.

At one year follow-up predictors emerged that had not been



significant at posttest. Pretest scores on the Agoraphobic Cognitions Questionnaire (r = -.24, n = 50, p < .05) now surfaced as a significant predictor. This questionnaire measures the frequency of self-reported anxious cognitions such as "I'll have a heart attack; I'll go crazy." This finding empirically demonstrates the importance of maladaptive thinking as theorized by Beck (e.g., Beck & Emery, 1985), as those with higher frequency of negative thinking fared more poorly at follow-up, despite having participated in a therapy that attacked such cognitions with a varjety of cognitive modification approaches.

The remaining variable to predict follow-up status was Socioeconomic Status (r = -.25, n = 45). Clients who were more poorly educated and held lower status jobs, and who are therefore more likely to be poor, had a poorer long term outcome, even though they completed the 2 week program. That they completed the program (which has an extremely low drop-out rate) is noteworthy in that lower SES clients are more likely to terminate psychotherapy prematurely in general. Clients in our program reflect an extremely broad range of SES, varying from inner city welfare recipients to wealthy suburbanites. To my knowledge SES has not been examined in other studies of exposure. This finding takes us back to Monteiro's study, that is, clients who were generally better off fared better in treatment. To be poor and uneducated in the urban United States is to experience high levels of stress and demoralization that make it difficult to overcome stress- and depression-related problems such as agoraphobia.

It is commonplace to note that agoraphobic avoidance is likely to recur whenever a fresh spate of panic attacks are experienced. Some clients are able to absorb the panic without returning to avoidance. Here the attributional processes suggested by acores on the Agoraphobic Cognitions Questionnaire are likely to play a major role. Those clients who attribute the panic to a disease process such as heart disease or insanity are more likely to relapse or fail to continue to improve than those who can discern the stress-evoking situations in their environments and do something about them. (The poor, of course, may be able to do relatively little about such stressors, having few resources).

Perhaps a more interesting question is what sets off the panic attacks again. Here we are the captive of our theoretical biases. Some clearly believe that such attacks result from genetically based biochemical imbalances. My own belief is that a variety of stressors may be involved but that the most common have to do with some sort of separation or loss, or the threat thereof. One of our clients, for example, did extremely well in treatment and had even become an assistant in an exposure group when her daughter, on whom she was extremely emotionally dependent, suddenly left the house, eloping with a boyfriend of



whom the client disapproved. The client not only relapsed, she became far worse than she had ever been before treatment. Four years later, she is only now getting back on her feet again.

# What Can Be Done To Enhance Maintenance?

#### 1. Marital therapy

Obviously the results of several studies indicating that marital dissatisfaction is associated with poorer long term outcome lead us to hypothesize that therapy for the marital relationship combined with exposure might lead to more positive results. In several studies spouses have been included in the exposure program to assist the agoraphobic in exposure and to be educated about the nature of agoraphobia (Barlow et al., 1984; Boisvert et al., 1983; Cobb et al., 1984). On the whole posttest results, and the 6 months follow-up data available for one study, do not indicate that this procedure leads to better outcome. One study by Barlow et al. (1984) did find inclusion of the spouse to be helpful for the poorer marriages at least at posttest. Contrary to hypotheses, this was not associated with increased compliance with exposure in the improved subjects, but to the perception that the spouse had changed and had become more understanding and upportive. I personally am leary of including spouses as a cotherapist in this way. Spouses of agoraphobics often are disproportionately powerful as it is. I fear that assigning them a therapeutic role may contribute to the perception of the agoraphobic, who is most commonly a women, as one-down in the relationship. This comes perilously close to perpetuating negative sex role stereotyping in the relationship.

A recent study more clearly addresses the question of the effects of marital therapy proper, as opposed to including the spouse in exposure therapy. Bruce Arnow and colleagues (1985) followed brief exposure treatment with either marital communications training or a placebo couples relaxation group. At posttest and 8 months follow-up, the clients who received communications training showed significantly greater improvement on a number of measures such as the behavioral avoidance test and the behavioral diary. In particular there was less relapse in the group that had marital communications training. It is noteworthy that these results were obtained even though clients in general reported low levels of marital dissatisfaction at pretest on a marital dissatisfaction inventory.

## 2. Maintenance homework

Jansson and colleagues (1984) in a recent paper published one of the first efforts to explicitly study a maintenance program. Clients treated with exposure and applied relaxation were asked at the end of treatment to meet monthly goals for self-directed exposure and to self-monitor these efforts. At 6



months follow-up 16% of the clients were found to have relapsed at least somewhat according to the behavioral test. Compliance with homework instructions did not predict relapse. The simple instructions to engage in self-directed exposure may have been inadequate, although on the right track.

In this vein it is interesting to note that in Munby and Johnston's (1980) long-term follow-up study, clients who were treated in home-based treatment programs were less likely to relapse and seek additional treatment, than were clients treated in therapist-directed exposure programs. The home-based treatment program included spouse involvement as well as the provision of manuals which clients and spouses used to direct the treatment with minimal therapist involvement. Providing clients with educational materials and training them to be responsible for their change may give them skills required to maintain their gains during the follow-up period. While controlled research is needed on this issue, it may be that clients in such programs attribute their successes to their own efforts rather than to their therapists' warmth, support, and understanding. Clients in exposure treatment have been shown to attribute their gains more to such nonspecific therapist factors than to the exposure program itself (Mathews et al., 1976). Obviously when the therapist is gone, so is the support and understanding. A client who learns the importance of the exposure process through the manual treatment may be less inclined to feel deprived of crucial elements of auccess once the therapist has withdrawn. relapse rate among Temple clients who are able to continue in treatment for nonphobic issues once they have finished exposure, strongly suggests that attention to aspects of agoraphobics' distress beyond their phobic avoidance may be critical to their maintaining treatment gains. Arnow et al.'s study on marital therapy plus exposure provides empirical support for this That agoraphobics have numerous problems beyond assertion. phobic avoidance is widely acknowledged. For example, Mavissakalian and Michelson (1985) found that 17% of their sample suffered from at least one episode of major depressive disorder during a 2 year follow-up period. Why we expect that these problems will have no effect on the outcome and maintenance of treatment for agoraphobia is a mystery to me. Perhaps it is an inappropriate generalization from simple phobias which generally exist in isolation from the remainder of the personality. Numerous studies showing differences between agoraphotics and simple phobics and in the onset of the two disorders should have disabused us of such simplistic assumptions.

# 3. Panic reduction

A key to preventing relapse is the prevention of panic attacks, generally the trigger for renewed avoidance behavior. Reduction in stress levels by reducing marital conflict, increasing problem-solving abilities, and so forth should reduce



the frequency of panic, as will antidepressant medication. Alternatives to medication are critically important and need to be explored. One such alternative is respiratory control. The increasing focus on respiratory control in phobia programs atems from research suggesting that a large percentage of agoraphobics' panicky symptoms result from hyperventilation, or more precisely, from their interpretation of the symptoms caused by hyperventilation. Teaching agoraphobics to control these symptoms through slowly paced breathing is a highly effective coping technique. In a recent study Bonn et al. (1984) found that at 6 months follow-up, agoraphobics who had received both respiratory control training and exposure were significantly better off than those who had received exposure alone. I find respiratory control a powerful technique that clients continue to use after treatment ends.

In a final plea for a wholistic approach to agoraphobia, I will note that anxiety is related to an overall life style. Thus nutritional and other health considerations are important. Research has demonstrated that agoraphobics are particularly sensitive to stimulants such as caffeine (Charney et al., 1985). Dietary changes may, consequently, be helpful, and I generally mag clients to make them. Eighty percent of agoraphobics are women. I, and other feminist therapists, have often asserted that a major problem for women is that they focus largely on nurturing others (spouse, children, employers, etc.) to the detriment of themselves. Since social support has been found to mitigate the likelihood that stress will lead to anxiety and depression, and since I believe that agoraphobia in part stems from inadequate childhood nurturance and support, I firmly be lieve that therapists for agoraphobics need to teach these clients to self-nuture and to engage others in healthy mutually supportive relationships if they are to become sturdy individuals who will not succumb again to the effects of panic.

### Footnote

The author wishes to thank Ed Gracely for statistical consultation and Nazareth Pantaloni for assistance in data analysis. Requests for copies should be sent to Dianne Chambless, Ph.D., Department of Psychology, The American University, 4400 Massachusetts, NW, Washington, DC 20016.

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