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The Implications of Cognitive Change in the Treatment of Panic Disorder with Agoraphobia

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Running head: COGNITIVE CHANGE IN PANIC DISORDER

Abstract

This study was an extension of a previous study done by Spiegel, Bruce, Falkin-Gregg, and Nuzzarello (in press), the latter of which tested whether cognitive behavior therapy assisted alprazolam discontinuation in panic disorder patients. The focus of cognitive behavior therapy in relation to benzodiazepine discontinuation placed great emphasis on changing cognitive biases during the treatment process. The present study investigated whether groups differed on cognitive factors associated with panic disorder (e.g. catastrophic misinterpretations, sensitivity to bodily sensations, and a feeling of lack of control over emotions and situations) and whether that change predicted discontinuation. The results showed the alprazolam plus cognitive behavior therapy group had significantly greater cognitive change compared to the alprazolam only group. Furthermore, cognitive change, in addition to overall anxiety, was involved in predicting which subjects were able to successfully discontinue alprazolam treatment. Implications for benzodiazepine treatment in conjunction with cognitive behavior therapy are discussed.

The Implications of Cognitive Change in the Treatment of Panic Disorder with Agoraphobia

Panic disorder with agoraphobia (PDA) is extremely debilitating, prohibiting the daily functioning of thousands of people. It involves feelings of intense fear in circumstances when there is nothing to fear. The disorder is accompanied by severe attacks of panic which occur out of the blue for no apparent reason. Consequently, patients may develop an intense fear of that particular situation or circumstance. This fear facilitates the development of agoraphobia because patients do whatever they can to prevent a recurrence of the experience, thereby avoiding many aspects of everyday life. According to the Diagnostic and Statistical Manual (DSM-III-R), symptoms of panic disorder include "shortness of breath or smothering sensations; dizziness ...choking...accelerated heart rate...shaking; sweating; nausea...hotflashes; chest pain or discomfort; fear of dying; fear of going crazy or doing something uncontrolled during an attack" (American Psychiatric Association, 1987, p. 236).

The most widely used treatment for PDA is the benzodiazepine alprazolam (Xanax). Numerous studies have shown that alprazolam effectively controls panic attacks, allowing patients to resume normal activities (Ballenger, Graham, Burrows, DuPont, Lesser, Noyles, Pecknold, Rifkin, &

Swinson, 1988; Barlow, 1988; Rickels, Schweizer, Weiss, & Zavodnick, 1993). For example, Ballenger et al. (1988) executed a large placebo-controlled study to test the efficacy of alprazolam in the treatment of PDA. After three weeks of alprazolam treatment, 51% of subjects showed marked improvement and at the eight week point, 41% of subjects showed moderate improvement. Alprazolam was found to effectively decrease the frequency of both spontaneous and situational panic attacks, phobic fears, avoidance behavior, anxiety, and secondary disability. Furthermore, the study revealed a significantly larger dropout rate for subjects in the placebo group (102/234) as compared to the alprazolam treated group (21/247). The authors suggested that "the large difference in dropout rates, primarily because of ineffectiveness of placebo, was itself, a measure of the efficacy of alprazolam" (p. 419).

Although alprazolam is effective in the acute phase of treatment, others note that it creates physical dependency and can be extremely hard to discontinue due to withdrawal symptoms, such as rebound panic and anxiety (Busto, Sellers, Naranjo, Cappell, Sanchez-Craig, Sykora, 1986; Fyer, Liebowitz, Gorman, Campeas, Levin, Davis, Goetz, & Klein, 1987; Noyles, Garvey, Cook, & Suelzer, 1991; Pecknold, Swinson, Kuch, & Lewis, 1988; Rickels et al., 1993; Schweizer, Rickels, Case, & Greenblatt, 1990) For example,

Rickels et al. (1993) reported "a withdrawal syndrome in almost all of the 27 alprazolam-treated patients. Also, 33% of these patients were unable to successfully discontinue their medication" (p. 61). Of those who did discontinue, approximately half relapsed within the following months.

One idea to assist alprazolam discontinuation is to combine Cognitive Behavior Therapy (CBT) with alprazolam. CBT can be focused on altering features of panic disorder in order to facilitate the discontinuation process (Barlow, 1988; Beck, 1985; Clark, 1986; Klosko, Barlow, Tassinari, & Cerny, 1990; Otto, Pollack, Sachs, Reitzer, Meltzer-Brody, & Rosenbaum, 1993; Spiegel, Bruce, Falkin-Gregg, & Nuzzarello, in press). CBT places strong emphasis on the personal management of problematic anxiety through skill development, education, and systematic exposure to feared stimuli (Spiegel, et al., in press). Barlow, Craske, Cerny, and Klosko (1989) devised a specific form of CBT called Panic Control Treatment (PCT) which aims at reducing patients' fear of the bodily sensations which they associate with panic. Cognitive change is one area emphasized by CBT and many have hypothesized that successful discontinuation requires change in this dimension. For example, Otto et al. (1993) reported that 13 of 17 (76%) patients receiving CBT successfully discontinued benzodiazepine treatment compared to those receiving only slow taper (four of 16; 25%). They

speculated that their intervention "decreased fears and catastrophic misinterpretations of emergent panic sensations and withdrawal symptoms..." (p. 1489).

Patients with PDA suffer from a variety of cognitive dysfunctions. Specifically, one dysfunction of the disorder is the catastrophic misinterpretation of anxiety symptoms or situations. When feeling nervous, many patients often catastrophize about the outcome of their situation (Beck, 1985; Chambless, Caputo, Bright, & Gallager, 1984; Clark, 1986; Goldstein & Chambless, 1978). Clark (1986) explains that the stimuli which these patients misinterpret can be external or internal. If the original stimuli is external, such as a ballgame where a panic attack has previously occurred, then the patient experiences anticipatory anxiety of having another panic attack in this situation, and thus avoids the ballgame. However, the stimuli could also be an internal bodily sensation, like sweating or trembling. Here, the sweating will cause anxiety and perhaps the fear of losing control and having a stroke. If these bodily sensations are misinterpreted to be catastrophic, further anxiety occurs and the cycle continues, resulting in a panic attack. As a result, sufferers will avoid situations which may provoke these internal sensations.

The Agoraphobic Cognitions Questionnaire (ACQ) measures catastrophic misinterpretations and the way patients predict

the outcome of events. The directions instruct the patient to respond according to how they feel when nervous or frightened. It is a 14-item test in which each patient rates the items on a 5-point scale ranging from 1 (thought never occurs) to 5 (thought always occurs when I am nervous). The ACQ is two-factor. It emphasizes Social/Behavioral Concerns (*i.e. acting foolish, babbling or talking funny*). and Physical Concerns (i.e. *heart attack, going blind*). (Chambless, et al., 1984; Chambless & Gracely, 1989). Chambless et al. (1984) have determined that the ACQ is internally consistent (Cronbach's alpha = .80) and has good test-retest reliability.

Another important cognitive aspect associated with panic disorder is the patients' sensitivity to anxiety sensations which they feel will inevitably result in catastrophic situations, such as medical catastrophe, embarrassment, or death (McNally & Lorenz, 1987; Reiss, Peterson, Gurskey, & McNally, 1986). For example, when feeling an increase in heart rate, a patient may predict a heart attack. Being anxiety sensitive, which is prevalent among panic disorder patients, will cause them to be keenly aware of sensations and avoid potential anxiety-provoking situations (McNally & Lorenz, 1987; Reiss et al., 1986).

The Reiss-Epstein-Gursky Anxiety Sensitivity Index (ASI) is a questionnaire designed specifically to measure the fear

of bodily sensations so commonly found among panic disorder patients. The ASI is a 16-item test which centers on a variety of aversive consequences which may result from an anxiety provoking stimuli (*i.e. It scares me when my heart beats rapidly*) (Barlow, 1988; McNally & Lorenz, 1987; Reiss et al., 1986). The patient responds on a scale from 0 (strongly disagree) to 5 (strongly agree). Reiss et al. (1986) found the ASI to have sound psychometric properties and an adequate test-retest reliability. The ASI distinguishes itself from other anxiety tests in that it measures the "*fear* of anxiety symptoms, rather than the *frequency* or the *intensity* of these symptoms" (McNally & Lorenz, 1987, p. 4). Reiss et al. (1986) claim that the ASI is specifically correlated with panic disorder and agoraphobia and is a better predictor of fearfulness compared to other anxiety scales.

In addition to catastrophic misinterpretations and sensitivity to bodily sensations, one of the most ubiquitous features of panic disorder patients is their fear of losing control. Patients often feel that when something negative happens to them, whether it be external or internal, it can not be stopped or controlled (Barlow, 1988; Craske, Bunt, Rapee, & Barlow, 1991; Sanderson, Rapee, & Barlow, 1989). An empirical example of the role of perceived control was conducted by Sanderson et al. (1989). They used CO_2 to

induce lightheadedness in twenty panic disorder patients and compared those who believed they had control over the amount of CO_2 they were receiving, and those who did not. They found that the group who felt they had control over the amount of CO_2 enriched air they were receiving reported a fewer number of DSM-III-R related panic symptoms, had fewer catastrophic cognitions, and reported overall less anxiety than the patients who felt they had *no* control over the amount of CO_2 enriched air they were breathing. This suggests that the probability of having a panic attack decreased as the sense of control increased.

In order to measure patients' perceived level of emotional control the Emotional Control Questionnaire (ECQ) was developed (Rapee, Craske, & Barlow, 1989). The ECQ consists of a 15 item questionnaire with statements such as, "*I can control the degree to which I react to particular situations. When I am put under stress, I am likely to lose control.*" The patients respond on a 6-point scale from 0 (Strongly Disagree) to 5 (Strongly Agree). The ECQ has proven to have good test-retest reliability, construct validity, and internal consistency. Higher scores are an indication that the patient perceives more control over his emotions (Rapee, et al., 1989).

While adding CBT to alprazolam treatment has been successful in facilitating discontinuation, we still do not

know whether this is predicted by or corresponds with cognitive change. Catastrophic misinterpretations, lack of emotional control, and anxiety sensitivity are just a few of the cognitive aspects hypothetically involved in panic disorder. For example, a patient who becomes less sensitive to internal sensations during treatment, as measured by the ASI, may be less likely to catastrophize about these internal situations which may arise again during the taper process and after discontinuation. It would by very beneficial to determine if cognitive change in any of these areas can predict who successfully discontinues drug therapy.

The following study is an extension of a study done by Spiegel, Bruce, Falkin-Gregg, & Nuzzarello (in press) which compared the combination of CBT and alprazolam to an alprazolam only group. The original study involved 20 patients with chronic panic disorder, whose panic attacks had responded to treatment with alprazolam. Each subject underwent slow, flexible drug taper with or without concurrent cognitive behavior therapy. Results showed that 85% of the subjects were able to successfully discontinue pharmacotherapy. However, during the following three months, 60% of those who had been tapered with only supportive medical management (without CBT) relapsed, compared with none who had received cognitive behavior. The

present study attempted to determine: 1) If the addition of cognitive behavior therapy to alprazolam treatment resulted in more cognitive change than with the drug alone, and 2) Is the cognitive change which occurred from pre-treatment to post-treatment, as measured by the ECQ, ASI, and ACQ, involved in predicting successful long-term discontinuation of alprazolam.

It was predicted that the group receiving both alprazolam and CBT will have more cognitive change than the drug only group because CBT works at teaching patients to deal with somatic sensations and can alter their catastrophic misinterpretations (Otto et al., 1993). It was also hypothesized that changes in the ACQ, ASI, and ECQ scores may be involved in predicting successful vs. unsuccessful discontinuation because these scales emphasize the cognitive aspects associated with panic disorder. These results would support the notion that altering distorted cognitions prepares subjects to deal with the recurring symptoms which often arise during and after drug taper.

METHOD

Subjects

Subjects met the DSM-III-R criteria for panic disorder with agoraphobia of at least 6 months duration. They were recruited by the University of Illinois Anxiety Disorders Clinic at Peoria to participate in a alprazolam

discontinuation study. Subjects consisted of 4 males and 16 females totaling 20 subjects. Ages ranged from 26-51 with a mean age of 38 years.

Design and Procedures

After screening, subjects were stabilized on alprazolam for a 2 week duration. Following a two-week baseline period, subjects were randomly placed into two treatment groups: alprazolam maintenance and taper with supportive medical management (A-Only, N=10), or the same treatment plus cognitive behavior therapy (A+CBT, N=10). The protocol was approved by the Institutional Review Board of the college, and all subjects gave informed consent and agreed to random assignment.

Pharmacotherapy. Alprazolam maintenance and taper were carried out identically in both groups and consisted of two phases: a stable-dose phase, during which subjects were maintained on therapeutic doses; and a taper phase of variable length, during which alprazolam was decreased every 7-14 days until either discontinuation was complete or the subject declined to reduce the dose any further. During the pharmacotherapy, the subjects met weekly with a psychiatrist, who was blind to the particular group assignment, for supportive medical management. Taper was done gradually in attempt to limit withdrawal symptoms.

Cognitive Behavior Therapy. The alprazolam plus CBT

group differed solely from the alprazolam only group in that subjects received a form of CBT (Panic Control Treatment) designed by Barlow and Craske. It was administered to subjects individually in 12 weekly sessions in accordance with written manuals. The therapy incorporated the following components: education about panic disorder, training in slow, diaphragmatic breathing, cognitive restructuring, and interoceptive exposure (i.e., exposure to feared bodily sensations).

Measures

Experienced clinician- and self-ratings were made at pre-treatment baseline (the two weeks following drug stabilization), 2 weeks post-treatment (two weeks after the last successful taper step), and a 15-weeks post-treatment. The evaluator was blind to the subjects' group assignment.

Anxiety Sensitivity. The Anxiety Sensitivity Index was used to assess sensitivity to anxiety sensations (ASI, 16 items, 0-80 total score, Reiss et al., 1986). (See Appendix A)

Catastrophic Cognitions. Catastrophic misinterpretations due to experiencing anxiety were assessed by the Agoraphobic Cognitions Questionnaire (ACQ, 15 items, 0-5 total average score, Chambless, et al., 1984). (See Appendix B)

Emotional Control. Subjects' beliefs about the control

they have over anxiety and their emotions was assessed by the Emotional Control Questionnaire (ECQ, 18 items, 0-75 total sum score; Rapee et al., 1989). (See Appendix C)

Phobic Avoidance. Level of agoraphobia rated by each subject was assessed using the Mobility Inventory for Agoraphobia (MIA, 27 items, 1-5 total average score; Chambless, et. al, 1984).

Depressed Mood. The Beck Depression Inventory (BDI) was used to assess level of depression. It contains 21 items and a 0-63 total sum score (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).

Anxious Mood. The Hamilton Anxiety Rating Scale consists of 14 items with a 0-56 total sum score (Hamilton, 1959). It was used to measure general anxiety.

Panic Attacks and Anticipatory Anxiety. The Sheehan Panic and Anticipatory Anxiety Scale (Sheehan, Coleman, Greenblat, Jones, Levine, Orsulak, Peterson, Schildkraut, Uzogara, & Watkins, 1984) was used by the clinician to rate the frequency, intensity, and duration of anticipatory anxiety and spontaneous, situational, limited symptoms (less than 4 symptoms), and full panic attacks (greater than or equal to 4 symptoms). Self-reports of these same dimensions were assessed using daily diaries which were administered two weeks prior to each major assessment point.

The data of 20 panic disorder patients was reviewed and analyzed using Analyses of Covariance (ANCOVA) with the pre-treatment scores as the covariate, to check for significant differences between the two groups at two-weeks post-taper and 15-week follow up. In addition, the change in scores on all measures were computed and analyzed using Stepwise Logistic Regression (SPSS PC+). The study also determined which, if any,, measures predicted who successfully discontinued alprazolam treatment.

RESULTS

Results of the ANCOVAs are depicted in Table 1 along with each groups' mean test scores at baseline, two-weeks post-taper and 15-weeks post-taper. At 2-weeks post-taper, a significant difference between the two groups existed on the following measures: Disability (Clinician-Rated Disability Scales; $p<.04$), Anticipatory Anxiety Frequency (Sheehan Panic and Anticipatory Anxiety Scale; $p<.02$), Catastrophic Thinking (ACQ; $p<.003$), and Emotional Control (ECQ; $p<.04$). At two-weeks post-taper the alprazolam plus CBT group showed significantly more improvement on every one of these measures. ANCOVAS performed at 15-weeks post-taper revealed significant differences in Anticipatory Anxiety Intensity (Sheehan Panic and Anticipatory Anxiety Scale; $p<.03$), Anxious Apprehension, Anxiety (Hamilton Anxiety Rating Scale; $p<.03$), and Depression (Beck Depression Inventory;

$p<.04$) as well.

Insert Table 1 about here

Logistic Regression Analyses were used to test if pre-treatment to post-treatment change in any dependent measure predicted discontinuation outcome. The entry criteria used was .05 while the exit criteria was conservatively set at .10. Results showed that only two variables significantly predicted the outcome. The pre-treatment to post-treatment change in the ASI and the Hamilton Anxiety Rating Scale (HAT) were the two variables which the model retained. Specifically, the results showed that a pre-treatment to post-treatment decrease in scores on the ASI and the HAT predicted successful discontinuation whereas no change predicted failure. The combination of the two correctly classified 85% of patients.

The major goal of the regression model was to predict group membership, which did successfully occur. The Model Chi Square was used to test the significance of the model and was significant at .0008. In addition to the predictive value of the ASI and the HAT, when the ASI was removed, the ACQ and HAT classified 80% of the subjects correctly, indicating the ACQ was also a good predictor of discontinuation success.

DISCUSSION

As early as two weeks following drug taper, subjects in the alprazolam only group were showing significantly different scores than the combination group on a variety of measures. In particular, the results confirmed the proposed hypothesis that the alprazolam plus CBT group would have significantly more cognitive change than the alprazolam only condition. The subjects receiving alprazolam only were continuing to catastrophize and were more likely to underestimate perceived levels of control as measured by the ACQ and ECQ, respectively. They also anticipated more anxiety which had a distinct disabling effect on their lives. These differences between the groups at two-weeks post-taper were the first indications that perhaps the group receiving CBT experienced a cognitive restructuring, helping them to deal with the recurring symptoms after drug taper.

In addition to the cognitive differences between the two groups at two-weeks post-taper, by 15-weeks post-taper the subjects in the alprazolam only condition were experiencing an overall anxious mood and a higher level of depression than the subjects in the combination group. It appears as though a cycle developed as the drug only subjects completed the taper process. As follow-up progressed without any cognitive change, they did not know how to deal with the recurring symptoms, such as rebound panic and anxiety. As a

result, they began catastrophizing again, became more anxious, and perceived a lower level of emotional control. By 15-weeks post-taper, the alprazolam only subjects were significantly more anxious and depressed. In addition, 60% of this group went back on medication.

These results supported the first hypothesis that more cognitive change would occur in the alprazolam plus CBT condition than in the alprazolam only group. Because this change occurred during treatment, CBT subjects may have been better prepared to deal with recurring symptoms after alprazolam was discontinued. Furthermore, this implies that CBT is an important factor involved in facilitating cognitive restructuring during panic disorder treatment.

The second hypothesis offered that perhaps a lack of change on the cognitive measures (ASI, ACQ, and ECQ) during treatment would be a significant predictor of relapse. Logistic Regression Analyses partially supported this hypothesis by revealing that the ASI and the Hamilton Anxiety Rating Scale (HAT) had significant importance in determining treatment outcome, despite their uninvolvement with the first hypothesis. Change in scores on the ASI and the HAT were found to be most associated with predicting successful discontinuation. Clinically, this means the patients who were still keenly sensitive to their bodily sensations and who were experiencing an overall anxious mood

at two-weeks post-taper were the ones who relapsed. Seemingly, successful discontinuation required cognitive change in these two areas.

In addition to the role of the ASI, the ACQ, when used with the HAT, correctly classified the subjects 80% of the time. This suggests that the ACQ does have some predictive value. Perhaps it was not more strongly correlated with discontinuation success as was predicted because it measures general catastrophic thinking and the subjects' symptoms were more specified. Like this measure, the ASI also tests for catastrophic thinking, but it is specific to bodily sensations. This proposes that anxiety sensitivity is a target point that needs to be addressed when treating panic disorder patients, either through CBT or another means. The other target point is anxious mood. At two-weeks post-taper, the subjects who were still experiencing a general anxiety and edginess, in addition to being anxiety sensitive, were likely to go back on alprazolam treatment.

Although this hypothesis was only partially supported, the results and implications are encouraging. First, the findings imply that CBT is responsible for the significant decrease in anxiety sensitivity as reflected by the lower scores on the ASI for the subjects in the combination group compared to the alprazolam only subjects. While this study does imply this correlation, further research is necessary

to conclude the implication. One recommendation is to do the same type of discontinuation study using a normal version of CBT and a form of CBT which is controlled for all else except anxiety sensitivity. This research could investigate the existence of the correlation between CBT and anxiety sensitivity suggested by this study.

Another interesting result revealed that four alprazolam only subjects showed a decrease in scores on the ASI and the HAT, and successfully discontinued medication. Unlike previous suggestions, this implies that there may be other ways, besides structured CBT, to alter cognitions and anxiety during benzodiazepine treatment. Perhaps, a self-help mechanism which employs relaxation training and cognitive restructuring would be just as effective as full blown CBT. The fact that four patients did their own CBT without any prior instruction proposes that changing cognitions and anxious mood may be considerably less complex than previously expected. This study opens new avenues regarding effective agencies for altering dysfunctional cognitions. Further research can be aimed at looking for other mechanisms by which to alter the dysfunctional cognitions of panic disorder patients.

Surprisingly, although change in ASI predicted relapse, it failed to show significance and between group differences at either two-weeks post-taper or 15-weeks post-taper as was

predicted, although the differences were very close to conventional levels at .09 and .08, respectively. One possible explanation for this is that by 15-weeks post-taper, 60% of the drug only group went back on alprazolam. Therefore, the benzodiazepine could have been alleviating the sensitivity to the physical symptoms which the ASI specifically tests. The subjects most likely were not feeling a rapid heart beat, as a result, they may have been temporarily less fearful. While unavoidable, this was one problem with the study. It was impossible to get a score on the ASI which accurately reflected the differences between the two groups when so many subjects went back on medication. However, the fact that 60% went back on alprazolam simply validates the importance of cognitive restructuring.

Another problem with the study is that it lies upon the assumption that cognitive change will be accurately represented by the ACQ, ASI, and ECQ. These measurements have proven to be valid in assessing the cognitive symptomatology of panic disorder (Chambless, et al., 1984; McNally & Lorenz, 1987; Rapee et al, 1989) however, the specific cognitive change may not always be accurately measured or indicated by the subjects' self report. In addition, while this study found cognitive change to be an essential component for panic disorder treatment, many other

factors can be responsible for unsuccessful discontinuation or relapse. For example, age of onset, duration of the disorder, previous medication use, stress, or personal experiences could all possibly affect subjects' inability to discontinue their medication. Yet these correlations have not yet been specifically addressed. In order to determine what, if any, external factors are associated with unsuccessful discontinuation or relapse, further research is necessary.

Since the cognitive factors were found to be a large component in the treatment of PDA, one implication could be that CBT be specifically targeted to provide the most beneficial cognitive restructuring techniques. In particular, it should be aimed at altering patients' sensitivity to bodily sensations and lowering their overall level of anxiety. In addition, it should work at modifying patients' perceived levels of emotional control and their catastrophic thinking. This specific emphasis in cognitive restructuring could facilitate benzodiazepine discontinuation and reduce relapse rates. The specialization of CBT and the creation of similar mechanisms would be beneficial to test in further research.

Perhaps the ASI and the HAT could be used prior to tapering patients off medication in order to determine if they are less sensitive to their bodily sensations and are

experiencing a decrease in overall anxiety. If not, they may not be able to deal with the withdrawal symptoms which may arise. For example, if after 12 weeks of alprazolam and CBT a patient is still very sensitive to his bodily sensations and still experiencing an anxious mood, he will not be able, or ready, to successfully discontinue medication. Thus, he should not be taken off the drug. Further research testing the use of these two measures as determinants or regulatory mechanisms is imperative.

Overall, the study puts forth the idea that benzodiazepine discontinuation involves more than just a decrease in drug dosage. Cognitive factors and level of anxious mood seem to play a major role in predicting who can successfully discontinue drug therapy and remain off the medication. Benzodiazepine treatment may stop the symptoms of the disorder, but it does not reduce the actual fear. When used alone, it only leads to avoidance. Unless the patients have a significant amount of cognitive restructuring, via CBT or another agent, relapse is likely to occur. The discontinuation process must consider both the biological and cognitive factors which occur among patients from pre-treatment, through discontinuation, and into the following months. If subjects are still experiencing and anxious mood and are fearful of their bodily sensations, this is a strong indication of relapse

and unsuccessful discontinuation. Treatment plans, whether they incorporate a form of CBT or another mechanism, need to keep these results in mind. In conclusion, this study targets specific cognitive features of PDA and makes substantial suggestions for improving both benzodiazepine discontinuation and treatment intervention.

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Appendix A

ANXIETY SENSITIVITY INDEX

Name: _____

Age: _____ Date: _____ Sex: M____ F____

Listed below are a number of statements describing a set of beliefs. Please read each statement carefully and, on the 0-5 scale given, indicate how much you think each statement is typical of you.

-----0----------1----------2----------3----------4----------5-----

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

_____ 1. It is important to me not to appear nervous.

_____ 2. When I cannot keep my mind on a task, I worry that I might be going crazy.

_____ 3. It scares me when I feel 'shaky' (trembling).

_____ 4. It scares me when I feel faint.

_____ 5. It is important to me to stay in control of my emotions.

_____ 6. It scares me when my heart beats rapidly.

_____ 7. It embarrasses me when my stomach growls.

_____ 8. It scares me when I am nauseous.

_____ 9. When I notice that my heart is beating rapidly, I worry that I might have a heart attack.

_____10. It scares me when I become short of breath.

_____11. When my stomach is upset, I worry that I might be seriously ill.

_____12. It scares me when I am unable to keep my mind on a task.

_____13. Other people notice when I feel shaky.

_____14. Unusual body sensations scare me.

_____15. When I am nervous, I worry that I might be mentally ill.

_____16. It scares me when I am nervous.

Appendix B

AGORAPHOBIC COGNITIONS QUESTIONNAIRE

Name:_____ Date:_____

Below are some thoughts or ideas that may pass through people's minds when they are nervous or frightened. Please rate how often each thought occurs to you when you are nervous. Do this by writing the appropriate number from the following scale in the space next to the thought.

1. Thought never occurs.
2. Thought rarely occurs.
3. Thought occurs during half of the times I am nervous.
4. Thought usually occurs.
5. Thought always occurs when I am nervous.

_____ I am going to throw up.

_____ I am going to pass out.

_____ I must have a brain tumor.

_____ I will have a heart attack.

_____ I will choke to death.

_____ I am going to act foolish.

_____ I am going blind.

_____ I will not be able to control myself.

_____ I will hurt someone.

_____ I am going to have a stroke.

_____ I am going to go crazy.

_____ I am going to scream.

_____ I am going to babble or talk funny.

_____ I will be paralyzed by fear.

_____ Other ideas not listed (please describe and rate them).

Appendix C

EMOTIONAL CONTROL QUESTIONNAIRE

Name: _____

Age: _____ Date: _____ Sex: M ___ F ___

Listed below are a number of statements describing a set of beliefs. Please read each statement carefully and, on the 0-5 scale given, indicate how much you think each statement is typical of you.

0	1	2	3	4	5
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

___1. I can control the degree to which I react to particular situations.

___2. How well I cope with difficult situations depends on whether I have outside help.

___3. When I am put under stress, I am likely to lose control.

___4. I can easily turn a difficult situation into a manageable one.

___5. My emotions seem to have a life of their own.

___6. I can deal successfully with stressful situations.

___7. Whether I can successfully escape a frightening situation is always a matter of chance with me.

___8. I can usually influence the degree to which a situation is potentially threatening to me.

___9. The degree to which I react to problems is out of my control.

___10. The extent to which a difficult situation resolves itself has nothing to do with my actions.

___11. There is nothing I can do to stop anxiety once it has started.

___12. Any little thing can make me uptight.

___13. I feel like I am the victim of my emotions.

___14. I am able to control my level of anxiety.

___15. I am able to prevent myself from becoming overly anxious.

Table 1

Differences Between the A+CBT and A-Only groups at Two-weeks Post-taper and 15-weeks Post-taper

Measures	Major Assessments							
	Baseline		2-wks post-taper			15-wks post-taper		
	A+CBT	A-Only	A+CBT	P	A-Only	A+CBT	P	A-Only
Disability								
Monthly Average	1.97	1.95	.73	.04	1.43	.48	.03	2.97
Anticipatory Anxiety								
Frequency (week)	5.30	6.70	1.00	.02	6.80	.40	.03	11.60
Intensity	3.10	3.70	2.30	.29	3.50	1.00	.03	3.60
Anxious Mood								
Hamilton Anxiety Scale	10.70	9.40	10.40	.10	14.60	6.30	.02	15.30
Depressed Mood								
Beck Depression Inventory	7.50	7.60	4.50	.22	7.60	2.50	.04	9.90
Catastrophic Thinking								
Agoraphobic Cog. Ques.	1.91	2.11	1.39	.003	2.00	1.29	.006	2.02
Fear of Anxiety Sensations								
Anxiety Sensitivtiy Index	39.00	47.90	29.70	.09	42.90	24.80	.08	42.00
Emotional Control								
Emotional Control Ques.	46.60	44.20	55.30	.04	44.50	59.05	.009	40.60

Note. A+CBT = Alprazolam plus Cognitive Behavior Therapy; A-Only = Alprazolam Only; P = Significance Level ($p<.05$).