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A qualitative analysis of mindfulness practice and cognitive therapy tools in preventing relapse from depression

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Depression continues to be one of the most common mental disorders. With chronic depression studies showing an increased risk of incapacity and repeated relapse to be significantly high, continued exploration on preventing relapse is valuable. Research on the prevention of relapse from depression has shown that both cognitive treatment and mindfulness practices can be effective when patients utilize tools and develop skills. This study looked at three tracks of participants diagnosed with a mood disorder. The three tracks were Cognitive Therapy (CT), Mindfulness Training (MT), and Treatment As Usual (TAU). All participants had been trained in CT and then randomly separated into three groups. These three tracks were assessed at 3, 6, and 12 months in terms of their stated level of depression (measured on the Beck Depression Inventory). This study was a qualitative follow-up to a previous study (Alexander *et al.*, 2012). In the current study, the participants reported the tools and skills they used to manage their depression. The following results were obtained. Seventeen tools/skills were identified by three independent coders from the participants self-reports. Three sets of tools were used consistently and significantly across all three tracks: (a) catching and refuting thought distortions, (b) examining thought records, and (c) an activity schedule (GRAPES). Surprisingly, more participants in the TAU track reported the use of mindfulness practices at 12 months than those in the MT tract. There was no significant change in reported depressive symptoms for any of the groups. The authors discuss the implications and practice uses of these findings.

Key words: Depression, cognitive therapy, mindfulness, therapy tools.

INTRODUCTION

Recent statistics from the World Health Organization (2012) place depression as the leading cause of disability worldwide and affecting 350 million people of all ages. Studies on depression identify this mental disorder as treatable and research on CT (Cognitive Therapy) reveals a reduction in relapse and reoccurrence (Bockting *et al.*, 2005; Fava, Grandi, Zielezny, Canestari, and Morphy, 1996; Jarrett *et al*, 2001; Paykel *et al.*, 1999). A complicating factor is the repeated relapse rates of 80-90% (Chen, Jordan, and Thompson, 2006; Judd, 1997) with the risk of chronic incapacity (Kennedy, Abbott, and Paykel, 2003). The theory around CT is that the more the patients identify the relationship between

their thoughts, feelings, and behavior, the better they will be able to modulate their emotional distress. Skills are taught with the supposition that if they acquire, comprehend, and practice these skills, they will have a reduction in symptoms. While patients are taught CT skills there are few measures available that assess how these tools promote cognitive and behavioral change. Some studies have identified measures to recognize the patients' awareness of automatic thoughts (Wright *et al.*, 2002) or the comprehension and usage of the CT skills (Strunk, DeRubeis, Chiu, and Alvarez, 2007). One group of researchers (Jarrett, Vittengl, Clark, and Thase, 2011) developed their own measure to assess patients under-standing and use of CT skills. Their findings supported their hypothesis that CT skills acquisition predicted a reduction in depressive symptoms.

The introduction of mindfulness into the CT model in

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prevention of relapse from depression was explored by Segal, Williams, and Teasdale (2002). Clinical applications of mindfulness had already been adopted into therapeutic approaches such as Dialectical Behavioral Therapy (Linehan, 1993) and Acceptance and Commitment Therapy (Hayes, Strosahl and Wilson, 1999). Kabat-Zinn (1994) developed Mindfulness-Based Stress Reduction (MBSR) for pain management, yet MBSR began to be used for multiple chronic illnesses. Examples include eating disorders (Courbasson, Nishikawa, and Shapira, 2011; Trapper *et al.*, 2009), anxiety disorders (Roemer, Orstillo, and Salters-Pedneault, 2008), posttraumatic stress disorder (Owen, Walter, Chard, and Davis, 2012; Wolfsdorf and Zlotnick, 2001), and substance abuse (Courbasson, Nishikawa, and Shapiro, 2011). The principles of mindfulness have enjoyed increased attention in the psychological literature and psychotherapy practice, moving from a Buddhist concept of understanding mental processes of impermanence, non-attachment, and letting go (Khong, 2009) to a mainstream construct in therapy viewing the subjective, fluid, and temporary nature of mental states that impact emotional regulation and cognitive flexibility (Wallin, 2007). The purpose of this study was to identify if there were specific tools that the patients learned that they continued to use to manage their depression and prevent relapse. This is a qualitative follow-up investigation of a previously published study (Alexander *et al.*, 2012).

METHOD

Research Setting and Design

This study originated at a West Coast psychiatric hospital outpatient program in a large urban city. Patients were assigned to three tracks and followed at 3, 6, and 12 months after discharge from the Cognitive Intensive Outpatient program (COGIOP). This program was attended by adults whose primary diagnosis was a Mood Disorder and often a step down from inpatient hospitalization. The primary treatment modality was cognitive therapy and patients typically attended the five day a week program for six weeks. The format of the program was three hours a day, where patients attended a psycho-educational lecture and then a 1 hour 45 minute group session. Licensed trained CT therapists taught patients principles and skills of CT and attempted to increase awareness on negative and distorted thoughts and replace them with more evidence-based inquiry. Patients were also trained in relaxation techniques to manage difficult emotional states.

Participants

The participants were 201 patients who attended the COGIOP for at least 20 sessions. All were diagnosed with at least one episode of Major Depression or Bipolar Disorder, Currently Depressed, as defined by the Diagnostic and Statistical Manual of Mental Disorder-IV-TR (American Psychological Association, 2000). Current levels of depression were less than 20 on the Beck Depression Inventory (BDI, Steer, and Brown, 1996). This cut off score was seen as an indication of the participants' capacity to concentrate and be able to focus on mindful exercises. The demographic information was collected separately and only 82 of the 201 responded. Of these individuals, 45% percent were between 38 and 52 years of age, 72% were female, 40% married, 83% Caucasian, 54% Christian. All had at least a high school education and 66% had a bachelor's degree or higher. One hundred percent were diagnosed with a Mood Disorder (80% Major Depression and 20% Bipolar, Currently Depressed). Fifty-two reported an additional diagnosis of an Anxiety Disorder, 52% had had seven or more bouts of depression prior to the COGIOP, 89% were still on antidepressant medication, and 9% had been hospitalized since they left the program.

Measures

The BDI (Beck *et al.*, 1996) is a 21-item self-report questionnaire that measured attitudes and symptom characteristics of the diagnosis of depression. Patients rated these symptoms such as "I don't sleep as well as I used to" or "I cry all the time now" on a scale of 0 (not at all) to 3 (all the time). Patients can score between 0-63. Participants in the aftercare tracks were required to have a BDI less than 20 at the day of discharge to be in the study. The BDI was completed at discharge from the COGIOP and at 3, 6, and 12 months.

All of the participants were followed up with a survey mailed to them at 3, 6, and 12 months, in a return self-addressed stamped envelope. The survey consisted of the BDI and a two open-ended , qualitative questions:

1. Have you continued to use cognitive tools which you learned in the program and/or in the four Monday evening sessions? If so, which tools have you continued to use?
2. Are you practicing mindfulness? If so, how often and what types of practice are you using?

Procedure

Patients who attended a minimum of 20 treatment days in the COGIOP and had a BDI score less than 20 were eligible for this aftercare study. All of the patients volunteered, signed an informed consent, and were randomly assigned to one of three tracks. The first track was the CT track. Patients assigned to this track attended a three hour, once a week session for four

weeks with a focus on relapse prevention. Their format was the same as the COGIOP, where the first hour was psycho-educational followed by a 15 minute break and a 1 hour 45 minute group. Patients reviewed CT techniques and skills. This track was taught by therapists trained in the principles of cognitive therapy.

The second track was the MT. Participants attended a three hour, once a week for four weeks session, where the focus was on learning mindfulness practice. All of the participants in this track engaged in three hour mindfulness education and practice and listened to a 30 minute CD daily (self-report) which consisted of mindful breathing exercises and focus on sensations in various parts of their bodies with awareness and non-judgment. Patients were further educated to mindfulness principles of letting go, staying in the present, and viewing thoughts as mental events and not facts. This track was facilitated by trained therapists with their own mindful practices.

The third track was the TAU and was comprised volunteers who were discharged from COGIOP and followed up with outpatient therapists and/or psychiatrist.

Three independent coders, who were knowledgeable in the COGIOP program, read the patients responses to the open-ended items on the survey and placed them into 17 tool categories. The inter-rater agreement for the coders was between 80-90%. The 17 categories were:

1. Mood tracking/daily inventory: A brief inventory with ten items, measuring the patient's level of depression that day and charted to show fluctuations in daily mood.
2. Conflict resolution worksheets: Healthy and unhealthy ways of managing and resolving conflict worksheets.
3. Thought records: Examining the situation, thoughts, feelings, and behaviors. What is the evidence that the thought is true and what is the evidence the thought is not true? The goal is to come up with a more balanced thought.
4. Thought distortions: Identifying faulty thinking and changing it.
5. Activity Schedule (GRAPES): A worksheet that lists daily activities related to G (gentle with self), R (relaxation), A (accomplishments), P (pleasure), E (exercise) and S (social).
6. Assertiveness script (DEESC): Write out script to increase assertive behavior. D (describe problem), E (express emotion), E (empathy; how does this impact the other person), S (specifics; i.e. I want… or I need…), C (consequences; if …then…).
7. Core Belief/Schema work: Beliefs about ourselves, others, and the world from early experiences which is the way in which we interpret and process situations. Core belief work assists the patients in identifying their personal beliefs which make them vulnerable to depression.
8. Journaling: A log of our beliefs and feelings at the present moment to have a better understanding of how we are interpreting information and events.

9. Responsibility pie: To process our role in a situation. If the situation or event was a piece of pie, how big would your role be? Who else would be involved in the event and what would their roles be?
10. Boundaries: Discussing behaviors indicative of fluid, healthy, and rigid boundaries.
11. Distractions: Ways to remove ourselves from difficult emotional states such as counting by backwards by 7.
12. Motivation model: Action leads to motivation which leads to more action. Examining the pros and cons of avoidance and action.
13. Pros/Cons worksheet: Problem identification, brainstorming possible solutions, listing the pros and cons of each option.
14. Decatastrophizing worksheet: Identifying the situation creating anxiety and ones belief about the danger. The worksheet examines the evidence to support and refute the belief about the danger (my job is at risk) and about one's control (there is nothing I can do about it).
15. Anger management: RETHINK model. R (recognize when you are feeling angry), E (empathize with the person or situation causing the anger), T (think instead of just emoting), H (hear what the other person is saying), I (integrate respect but thinking in a non-angry way), N (notice your body's reaction to anger), K (keep focused on the present event not past grudges. Think of solutions).
16. Relaxation techniques: Imagery, diaphragmatic breathing, progressive muscle relaxation
17. Mindfulness: Of being in the moment, practicing letting go, increasing awareness without judgment; focus on the breath and body awareness.

RESULTS

Table 1 displays the BDI scores and the top three tools reported by the study participants across tracks 3, 6, and 12 months. The tools are listed according to the percentage of times they were reported and are ordered according to their percentage of reported use. One (1) represented the tool most often reported as used, two (2) the second most reported, etc. Tools reported at the same percentage were assigned the same order number. Three sets of tools stood out as being used consistently and significantly across all three tracks (CT, MT, and TAU). These standouts were (a) thought distortions, (b) GRAPES, and (c) thought records. Direct quotations from patients' surveys are included in Appendix A.

DISCUSSION

This discussion will not dwell on the BDI results and will focus mainly on the skill/tool use. With regard to the BDI, there are two apparent trends: (a) for the CT and MT groups, the scores rose slightly from month 3 to month 6

Table 1. Beck Depression Index (BDI) score and tool use across tracks and months.

	Cognitive track		Mindfulness track		Treatment as usual track	
3 month	**BDI** 8.83		**BDI** 9.51		**BDI** 13.55	
	Top three tools		**Top three tools**		**Top three tools**	
	1. Thought Records	25%	1. GRAPES	15%	1. Thought Records	14%
	2. GRAPE	15%	2. Thought Distortions	13%	2. Thought Distortions	13%
	3.Thought Distortion	14%	3i. Mindfulness	11%	3i. GRAPES	11%
			ii. Thought Records		ii. Journaling	
			iii. Journaling			
6 month	**BDI** 10.5		**BDI** 11.00		**BDI** 9.89	
	Top three tools		**Top three tools**		**Top three tools**	
	1i. Thought Records	20%	1i. GRAPES	13%	1. Thought Distortions	20%
	ii. GRAPES		ii. Thought Records			
	2i. Thought Distortions	6%	2i. Thought Distortions	12%	2. GRAPES	15%
	ii. DEESC script		ii. DEESC script			
	iii Journaling					
	iv Pros/Cons					
	3. Other	less than 6%	3. Mindfulness	10%	3i. Thought Records	10%
					ii Mindfulness	
12 month	**BDI** 7.75		**BDI** 8.70		**BDI** 12.29	
	Top three tools		**Top three tools**		**Top three tools**	
	1. Thought Records	18%	1. Thought Distortions	21%	1i.Thought Distortions	17%
					ii. GRAPES	
	2. GRAPES	15%	2. Thought Records	15%	2i. Mindfulness	13%
					ii. DEESC script	
	3. Thought Distortions	9%	3. GRAPES	12%	3. Thought record	11%

(e.g., the severity of depressive symptoms increased) but ended up lower at month 12; and (b) at month 3 and 12 (but not month 6) the CT and MT groups had lower scores (less severe depressive symptoms) than the TAU group. None of these trends is statistically significant (p > .2). This lack of significance is not surprising, however, because as noted in the participant section, patients with low BDI scores (less than 20) were selected for the study. This meant that there was not much room for reducing their depression with the treatments (i.e., there was a floor effect). This does not mean that the CT and MT groups were ineffective. An earlier study (Alexander *et al.*, 2012) did find that cognitive and mindfulness therapy with this same group did lower reported depression from a pre-treatment phase to a three-month post-treatment phase compare to treatment as usual.

It was significant that of all of the 17 skills/tools identified by the independent coders, three were consistently reported. This gave validity to the CT tools of catching and disputing thought distortions, GRAPES, and using thought records in managing symptoms of depression and in being skills that patients would continue to use outside of therapy.

Thought distortions that the participants were trained to identify were:

1. All or nothing thinking (thinking in extremes)

2. Minimizing or magnification (exaggerate negative factors and dilute positive factors)
3. Overgeneralization (sweeping judgments on a single event)
4. Filtering (focusing on one aspect of a situation, typically the negative aspect)
5. Catastrophizing (thinking that the worst case scenario will come true)
6. Personalization (taking responsibility for things that don't apply to you)
7. Jumping to conclusions (making negative assumptions without the evidence to support this)
8. Labeling (assigning labels to self or others)
9. Should statement (rigid unrealistic rules of self and others)

Participants reported that they were better able to identify these distortions and take a step back without the emotional reaction.

GRAPES provided a structure for patients who struggle with chronic depression and helped them to recognize that each day they could be gentle to themselves, in ways that include some form of relaxation, complete some accomplishment, find pleasure, include exercise, and increase socialization.

The thought records similarly required the patient to recognize their negative distortions and examine the

evidence for and against the thought creating emotional distress. Patients were trained to write down the thought that contributed to a negative shift in mood and then examine the facts that both supported and negated the thought. For example: you found out you did not get a job you interviewed for and say "I am such a loser." What are the facts that support this statement and those that negate it? CT assisted the patients in decentering from the thought and assessed the validity. The premise was to come up with a balanced thought. As in the example just stated "I am a loser" a balanced thought would be that "I don't do everything faultlessly but there is much I do well."

Current literature has highlighted the difficulty in defining the construct of mindfulness in self-report questionnaires (Baer, Smith, and Allen, 2004) and in self-report assessment (Grossman, 2011). The understanding of a construct such as being in the moment or non-judgmental awareness will differ from those with experience in mindfulness and those who are novices (Grossman, 2011). In the returned surveys, participants used the term mindfulness as a broader concept instead of identifying specific behaviors that focus on the breath or awareness of body sensations. For the purpose of this study, patients in the MT had training by therapists with their own mindful practice and reportedly practiced the awareness of the breath and body sensations along with an understanding of mindfulness as living in the moment, without judgment. It appeared that at the 3-month follow up, those who had the mindfulness training practiced this concept but less so at 6- and 12-month follow-ups. Both CT and MT have been shown to enhance emotional regulation (Corcoran, Farb, Anderson, and Segal, 2010; Farb *et al.*, 2010) and decrease rumination via disengagement from the cognitive processes (Cambers, Lo, and Allen, 2008). In this sense it may be difficult for the patient to specifically identify which skill they are using. As one participants stated "I am not able to explain the exact tools I use but can say that the combination of the months I spent in the program learning these tools changed my life." While the participants in the MT engaged in 30 min. per day practice, researchers in both MBSR and MBCT (Mindfulness Based Cognitive Therapy) recommended that patients engaged in 45 minutes of daily mindful practice (Kabat-Zinn, 1994; Teasdale *et al.*, 2000). Thus the reduced time of this practice for the study participants may have mitigated against a more vigorous integration of the practice into their daily lives consistently.

It was somewhat surprising that in the TAU track, the participants identified using mindfulness at six months to the same extent as the MT group and to an even greater extent at 12 months. The majority of the TAU participants were followed by outpatient therapists who may or may not have used mindful practice. Mindfulness practice has, however, reached popular press and the TAU participants may have used a different definition to describe their mindful practice.

Appendix A includes direct statements from the participants returned surveys. While many reported the benefits of the program or the tools learned and practiced, it was also apparent that this was a continual process, that lapses occur, and patients may continue to benefit from medication in conjunction with CT or MT, and that tools do not eliminate life stressors. However, as one participant stated "Learning these tools saved my life. Things are still quite difficult but I am managing."

While the study has brought attention to three specific tools and skills in CT that patients reported they consistently used to manage their mood state, it was also evident that treatment is unique to each individual and that clinicians need to find not only what is most beneficial for their patients but what are the skills and tools that they will continue to use. The patients in this study continued to benefit from the use of thought records, catching and disputing thought distortions, and GRAPES. The formats for these tools are included in Appendix B.

Future research might be to focus on those with a diagnosis of Bipolar Disorder, Currently Depressed to further research on the use of CT and MT for the management of symptoms for patients with this diagnosis. Another area of research to assess is the level of anxiety reported by these patients, as more than half were also diagnosed with an Anxiety Disorder. This would be correlated with the level of depression.

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APPENDIX

Appendix A

Statements of tool use by participants

CT: "I catastrophize and use diaphragmatic breathing and relaxing music and use a relaxing walk to get over these feelings."

CT: "I'm better able to be objective/detached about a situation I would have overreacted to… in the past. Also I am better at noticing when I'm negatively judging myself and my emotions and can stop it."

CT: "I have never been happier in my life and can actually say that "cog. therapy" works; it is not the medication (although it helps) but it is the understanding of our psyche….You can use me as an example that cog works. It was very difficult to cope with life before due to my upbringing and culture. But now I am totally different person, I take responsibility for my actions, I can see clear my future."

CT: "The return to the work environment has been stressful but I manage using different COG tools. I think about my time in the program and it was the best, healthiest thing I have ever done for myself."

CT: "I am sorry; the program did not work for me. It did in the beginning but due to side effects of meds I am a mess and angry…I just can't get well."

CT: "I tend to panic when I have significant anxiety and do better with my therapy techniques after taking my medication…Cognitive therapy techniques are most helpful after medication."

CT: "I'm going through a bit of a lapse right now and am trying to use the tools from COG to fight it. So far I am doing fine."

CT: "I really learned to be aware of my distorted thoughts. There's constantly an alarm going off in my head when one comes across. Before, I was completely unaware of my distorted thoughts."

MT: "Thought stopping, relaxation, mindfulness, and mental thought records. I repeat new core beliefs mentally when anxiety increases or old core beliefs raise their ugly head."

MT: "I am dealing with my anxiety in a positive way and I am going to be OK no matter what because I have come to the realization that every moment is precious and I intend to live and experience these moments as they may never come again. I want to say I lived my life and not my life happened.'"

MT: "Learning these tools saved my life. Things are still quite difficult but I am managing."

MT: "I believe the cognitive therapy skills and group and mindfulness meditation techniques changed my life for the better. I learned how to think and act and respond in healthy ways and how to know and respect myself and how to protect myself."

MT: "I still battle some pretty bad lows but I can now cope and feel a state of being OK with me."

MT: "I understand the importance of using GRAPES and staying on top of unpleasant thoughts. I have been avoiding using some of the techniques and saw my mood drop. I feel as though they were great things to learn."

MT: "I've been feeling quite well…Anytime I feel I am slipping a bit, I just analyze things like a thought record or de-catastophizing worksheet. Bad thoughts just don't last."

MT: "Life still has some real challenges. Now I face them and deal with them. I can still improve in some areas of my life, but I no longer tear myself up for my shortcomings. I have the tools and the abilities to have a really cool life and I look forward to living it instead of fearing it all the time."

TAU: "My focus is in living day to day and I try not to think about the future (though I always do). I stay busy and distracted."

TAU: "I strongly rely on the cognitive tools. This program saved my life and made it better."

TAU: "This program really helped. I wish I had known about it before life got so bad. It is one of the main components to me dealing with depression…"

TAU: "I have had increasing success in recognizing distorted thoughts as distorted, recognizing the types of avoidant or reactionary behaviors I 'automatically' adopt in response to cognitive distortions, and taking the time/energy to challenge and change thought/behavior patterns that keep me locked in cycles of distorted thinking behaviors."

TAU: "I no longer have thoughts of suicide because I now know why I was having these thoughts. I do not suffer from depression. Every day I look happily forward."

TAU: "Cognitive Therapy continues to be a big part of my life and feeling of successfully being able to function."

TAU: "I learned that it is critical to have the tools ready, and to use them. I was feeling great for a year and thought I was home free. Wrong. I had a relapse and my prevention plan is going to be very different this time around."

TAU: "Reframing my thoughts if they are negative, I am learning to be loving and compassionate with myself. This is a new way of living for me."

TAU: "I am not able to explain the exact tools I use but can say that the combination of the months I spent in the program learning these tools changed my life. I've worked pretty hard on some old issues that have been quite challenging. While going through them was quite painful it was healing and an ongoing process. I am taking it slow and can feel the progress."

TAU: "It has been a year since I was in the program…I am hard on myself which helps me with determination not to fail. I am strong and have a high level of will power. However, I have been feeling weak with the tools I learned in the program. It is difficult to continue on my own."

Appendix B

Tools used most consistently by participants

Thought distortions: Through training in identifying thought distortions such as all or nothing thinking (see examples under discussion), patients were able to increase their awareness of their faulty thinking and come up with more balanced thoughts.

GRAPES

	Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
Gentle with self							
Relaxation							
Accomplishment							
Pleasure							
Exercise							
Social							

Daily or weekly, the patients completed the chart above. They identified behaviors in the 6 categories. How will they be gentle with self, engage in a form of relaxation, achieve an accomplishment, participate in a pleasurable activity, engage in a form of exercise, and be social?

Thought record

Situation	Automatic thought	Emotion	Rating (0-100%)	Rational Response	Re-rating (0-100%)

Test of evidence

Evidence Thought is True

Evidence Thought is not 100% True

1. When you experience a shift in mood, what is the situation?
2. Identify the emotion you are experiencing such as depression, anger, anxiety. One emotion per thought record.
3. Rate the emotion on a scale from 0-100% (100 =most extreme, 0=absence of the emotion).
4. Identify the thought that is causing this elevated rating in mood. If there are several thoughts, choose the most extreme.
5. Evidence that the thought is true: Come up with as many facts as you can that support the thought
6. Dispute the thought: What is the evidence that the thought is not true.
7. After disputing the thought, identify a more rational thought.
8. Re-rate the intensity of the emotion.