

Running head: CASE STUDIES OF DEPRESSED PARKINSON'S PATIENTS

TELEPHONE-BASED COGNITIVE BEHAVIORAL THERAPY FOR DEPRESSION IN
PARKINSON'S DISEASE: FOUR PRAGMATIC CASES

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CASE STUDIES OF DEPRESSED PARKINSON'S PATIENTS

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Abstract

Four patients treated by the author as part of a telehealth cognitive behavioral treatment program (GSH-dPD) for depression in Parkinson's disease pioneered by Dr. Roseanne Dobkin were selected as subjects for pragmatic case studies. These case studies used the Pragmatic Case Study methodology to combine within each case a) quantitative data, comprised of demographic information, psychiatric diagnostic data, neurocognitive data, treatment outcome measures, and feasibility/adherence data, and b) qualitative data, consisting of post-treatment patient interviews and the author's treatment notes and observations. This study aims to provide a nuanced portrait of the TH-CBT treatment process, to explore the presence and influence of barriers and facilitators of treatment in an idiographic context, and to generate hypotheses regarding potential mediators and moderators of treatment outcome that might be tested empirically or used to guide clinical decision-making within this treatment paradigm. The Pragmatic Case Study approach was seen as an important complement to controlled empirical clinical research through its focus on the individual case rather than the sample, its emphasis on idiographic detail, its capacity to provide clinicians with hypotheses regarding clinical treatment questions for which empirical research is lacking or inconclusive, and its long-term potential to inductively generate clinical knowledge through the development of a cross-referenced case study database. Literature relevant to the treatment of depression in Parkinson's disease (dPD) was reviewed, a description and rationale for the application the Pragmatic Case Study approach was presented, a systematic case write-up for each of 4 the selected patients was presented, and clinical implications of these cases in the context of the dPD population and the TH-CBT treatment paradigm were explored. The themes addressed in the analysis of the four case studies included: caregiver involvement, cognitive impairment, management of tangentiality, coping with communication difficulties, the

role of cultural background in treatment, handling resistance to treatment, and working with the newly diagnosed.

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Introduction

Psychiatric Features of Parkinson's

Parkinson's disease (PD) is a common and highly debilitating degenerative neurological disorder. It is estimated that more than 10 million individuals currently suffer from PD worldwide, and recent estimates suggest that there are roughly 60,000 new cases of PD each year in the US alone (Parkinson's Disease Foundation, 2017). Motor symptoms are the hallmark of PD, and include tremors, rigidity and bradykinesia (slowed movement). In addition to motor symptoms, many PD patients suffer from psychiatric and cognitive symptoms, including anxiety, depression, psychosis, sleep disorders, and deterioration of executive function and memory.

Evidence suggests that these psychiatric and neurocognitive features of PD may lead to greater functional impairment and distress than the motor symptoms of the disease (Forsaa et al., 2008; Cummings, 1992). Depression is hypothesized to onset earlier than many motor symptoms of PD (Ishihara & Brayne, 2006; Shulman, Taback, Rabinstein & Weiner, 2002), and is one of the most common non-motor complications of the disease, affecting as much as 50% of PD patients (Reijnders et al., 2008). This prevalence rate is nearly twice that found in the general population, and higher than that found in patients with many other chronic medical conditions (Kessler et al., 2005; Tandberg, 1996).

Depression

Depression in PD (dPD) has been associated with increased psychiatric comorbidity, cognitive impairment, and caregiver burden, as well as lower quality of life. dPD patients show higher rates of psychiatric comorbidity than PD patients without depression. Anxiety disorders, including GAD, panic disorder, and social phobia, are particularly common (Dissanayak et al.,

2010; Schrag, Jahanshahi & Quinn, 2000). In one study, 19.3% of PD patients were shown to have both depression and a co-morbid anxiety disorder, compared to 8.6% among an age and sex-matched control group (Nuti et al., 2004), and in another study indicated that 67% of PD patients with depression also met criteria for an anxiety disorder (Menza et al., 1993).

dPD has also been associated with greater deficits in executive function. The incidence of depression in PD patients has been shown to increase as a function of cognitive deficits (Chagas et al., 2014). Demented PD patients are at increased risk for depression compared to non-demented patients, independent of age and disease duration (Riedel, Heuser, Kotsche, Dodel & Wittchen, 2010). Among non-demented PD patients, those with depression showed more difficulty on tests assessing broad executive function, verbal fluency and set-shifting (Santangelo et al., 2009).

Caregiver burden

Caregiver burden (CB), defined as the physical, mental and socio-economic challenges faced by caregivers of chronically ill patients (Zarit, Todd & Zarit, 1986), has drawn increasing interest in recent years from researchers studying PD, Alzheimer's disease, and other chronic medical conditions (Clyburn, Stones, Hadjistavropoulos & Tuokko, 2000; Longacre, Wong & Fang, 2013; Schrag, Horvis, Morley, Quinn & Jahanshahi, 2006). Evidence suggests that the severity of PD patients' depressive symptoms is positively correlated with CB. A study on 80 PD patients and their caregivers found a robust positive correlation ($r=0.50$) between PD patients' depressive symptom severity and caregiver burden (Martinez-Martin et al., 2007). In another study involving 123 caregivers of PD patients, over half of the caregivers demonstrated elevated depression scores, 40% reported that their caregiving responsibilities had led to

deterioration in their own health, and more than 60% stated that the quality of their relationships had been negatively impacted as a result of their caregiving duties. Again, the presence of psychiatric complications in PD patients, and particularly depressive symptom severity, were among the strongest predictors of burden for their caregivers (Schrag, Hovris, Morley, Quinn & Jahanshahi, 2006).

Quality of life.

Quality of life (QoL) has been defined as an individual's overall well being, and the degree to which that individual is capable of enjoying and deriving meaning from the experiences life has to offer in a variety of domains (e.g physical, social, psychological, spiritual) (Marsh, 2010). Evidence suggests that depression plays a major role in reducing QoL among PD patients. In a study of 97 PD patients analyzing predictors of functional impairment, depressive symptoms accounted for 54% of the variation in health related quality of life (HRQL) (Schrag, Jahanshahi & Quinn, 2000). In a year-long longitudinal study that tracked quality of life in a PD patient sample, depressive symptoms were the best predictor of lower HRQL (Reuther, Spotke & Klotsche, 2007), and Ravina and colleagues (2007) demonstrated that dPD was significantly associated with deficits in Activities of Daily Living (ADL). In an international study in which 1,020 patients and their caregivers in six countries underwent clinical interviews to assess the most important determinants of HRQL, adding depression symptom severity to PD disease stage and medication regimen dramatically increased the regression model's ability to predict patients' HRQL (adjusted $R^2 = 0.173$ without depression symptom severity as an independent variable vs. adjusted $R^2 = 0.589$ with depression symptom severity included) (Findley et al., 2002). Given the size and diversity of this study sample and the magnitude of the observed effect, these results

represent convincing evidence that depression should be considered one of the most significant clinical features of PD, and that the search for effective treatments for dPD deserves the attention of researchers and their funding sources.

Summary.

The psychiatric complications of PD, particularly depression, are associated with a host of functional impairments in patients and their caregivers, which cause profound distress and loss of quality of life without appropriate treatment. In addition, the neurocognitive, physical, and psychiatric complications associated with the dPD population have important implications for the development of effective psychological treatments, a topic that will be discussed in detail below.

Treatment for Depression in Parkinson's Disease

There have been a number of controlled trials studying the efficacy of pharmacological treatments for dPD (Bomasang-Layno et al., 2015 for a meta-analysis), with antidepressants (Devos et al., 2008; Menza et al., 2009), dopamine agonists (Barone et al., 2010), and dietary supplements (da Silva et al., 2008) demonstrating some efficacy. Non-medication therapies, such as cognitive behavioral therapy (CBT), may be particularly helpful for dPD patients who cannot tolerate, have not responded to, or do not wish to pursue pharmacological treatment options, as well as those for whom a combination of pharmacological and psychosocial interventions is indicated. However, relatively few studies of psychological interventions for dPD have been performed, despite evidence of efficacy for such interventions, particularly

Cognitive Behavioral Therapy (CBT), among older depressed populations (Serfaty et al., 2009) and in other depressed medically ill populations (Himelhoch et al., 2013; Mohr et al., 2000).

Generally, studies of behavioral interventions for the dPD populations have yielded promising results: a meta-analysis of pharmacological and behavioral interventions for depression and other psychiatric complications of PD showed an effect size of 0.87 for behavioral interventions, which compared favorably to the effect size found for pharmacological interventions (Bomasang-Layno et al., 2015). The majority of psychosocial interventions for dPD have used CBT as their primary treatment modality, and evidence suggests that CBT may be a particularly fruitful treatment approach for depression and other psychiatric complications of PD (Bomasang-Layno et al., 2015). However, generalizability of these positive findings is restricted by methodological limitations, including small sample size (e.g. Veazey, Cook, Stanley, Lai & Kunik, 2009), lack of a control condition (e.g. Farabaugh et al., 2010), and differences across studies in baseline sample characteristics and outcome measures (Yang, Sajatovic & Walter, 2012).

In the first randomized controlled trial (RCT) of a cognitive-behavioral intervention for dPD, Dobkin and colleagues (2011) assessed the efficacy of a 10-week face-to-face program. 80 dPD patients were randomized to either an experimental treatment condition (n=41), which involved a modified CBT program, tailored to the unique needs of the PD population, as well as clinical monitoring of depressive symptoms, or a control condition (n=39), which only included clinical monitoring. Both groups continued with treatment as usual under the care of their personal healthcare team. The CBT condition demonstrated a large and significant advantage over the control condition in mean reduction of depressive symptom severity, as measured by the Hamilton Depression Rating Scale (HAM-D) (Hamilton, 1960) at the end of the 10-week trial

(CBT = 7.35 vs. Control = 0.05) and at one-month follow-up (CBT = 6.41 vs. Control = 0.07).

In addition, the CBT experimental condition outperformed the control condition in treatment response rate at the end of treatment (CBT = 56% vs. Control = 8%) and at one-month follow-up (CBT = 51% vs. Control = 0%). The CBT condition also showed significantly greater improvement in anxiety symptom severity, social functioning and quality of life. Interestingly, baseline verbal and working memory significantly predicted treatment success among CBT condition participants ($p=0.006$). CBT condition participants also showed limited gains in verbal memory compared to control condition participants, but these between-group differences were non-significant and modest in size (Dobkin et al., 2014).

Subsequent analyses of the predictors of treatment outcome indicated that within the CBT group, caregiver participation was a significant predictor of treatment response when assessed at the end of treatment. At one-month follow-up, both caregiver participation and executive functioning predicted treatment response. Among all participants, baseline executive functioning was positively correlated with depression symptom improvement (Dobkin et al., 2014), while motor disability, psychiatric comorbidity, and caregiver burden were negatively correlated with improvement in depressive symptom severity (Dobkin et al., 2012).

These findings offer strong evidence that CBT is an effective treatment for dPD, point to potential moderators and mediators of treatment outcome, and highlight the need for further studies designed to replicate and expand these results.

Barriers to dPD Treatment

Despite the well-documented contribution of depression to distress and functional impairment in PD patients, and the growing evidence base for psychosocial and pharmacological interventions, dPD patients are faced with a number of barriers to effective treatment.

First, depression and other psychiatric complications of dPD are frequently overlooked or inadequately treated during routine clinical care (Dobkin et al., 2013; Starkstein et al., 1992). A study by Dobkin and colleagues (2013) surveyed a national sample of 769 PD patients to identify barriers and facilitators of mental health treatment in the PD population, and to assess the feasibility and interest in psychosocial treatment delivered via telehealth. The study's findings indicated that, of those who had received mental health treatment in the past, the primary obstacles to effective treatment were difficulty accessing care, lack of PD knowledge among mental health treatment providers, insufficient emphasis on non-pharmacological treatments, high financial burden of treatment, and a lack of effective treatment options. In addition, 84% of respondents reported that they would be more motivated to receive psychotherapy if they could do so from their own home, a majority of respondents reported having access to technology required to facilitate telehealth treatment (telephone = 71.9%, cellular phone = 67.3%, computer = 70.1%, Internet = 69.2%, e-mail = 70.4%), and a great majority reported feeling comfortable interacting with healthcare providers via these forms of technology (telephone = 87.6%, e-mail = 81.2 %, webcam = 58.9%).

Similarly, a prospective study of 101 PD patients receiving standard neurological care indicated that neurologists failed to recognize and diagnose depression and anxiety in this sample more than half the time (Shulman, Taback, Rabinstein & Weiner, 2002), and another prospective study showed that 40% of early-stage PD patients who met criteria for depression during the

course of the study did not receive antidepressant medication or referrals for psychiatric evaluation (Ravina et al., 2007). A diagnostic assessment for depression in a convenience sample of 100 patients at a PD clinic showed that two-thirds of those who met criteria for a depressive disorder were not receiving ADM treatment (Weintraub, Moberg, Duda, Katz & Stern, 2003). Under-recognition of depression and other psychiatric symptoms in PD may be explained by a lack of adequate history taking or psychiatric expertise on the part of PD patients' healthcare providers, as well as underreporting of relevant symptoms on the part of PD patients due to poor insight, fear of stigmatization, or the belief that their treating physician would not be interested in behavioral or psychological symptoms (Shulman, Taback, Rubinstein & Weiner, 2002).

Further complicating the diagnosis of depression in PD is the overlap between PD symptoms and somatic depressive symptoms, particularly fatigue, apathy, psychomotor retardation, cognitive impairment, loss of appetite and sleep disturbances (Schrag et al., 2007). Some have raised concerns that this overlap may make traditional diagnostic instruments for depression, and even the DSM-IV depression criteria, inappropriate for the PD population (Marsh, McDonald, Cummings & Ravina, 2006). On the one hand, overemphasis of overlapping symptoms may inflate rates of depression diagnosis, but deemphasizing overlapping symptoms may have the opposite effect and lead to poor criterion validity.

However, several studies suggest that certain instruments maintain acceptable reliability and validity despite their inclusion of somatic symptoms. A review of nine depression scales (Beck Depression Inventory (BDI), Hamilton Depression Scale (Ham-D), Hospital Anxiety and Depression Scale (HADS), Zung Self-Rating Depression Scale (SDS), Geriatric Depression Scale (GDS), Montgomery-Asberg Depression Rating Scale (MADRS), Unified Parkinson's Disease Rating Scale (UPDRS) Part I, Cornell Scale for the Assessment of Depression in

Dementia (CSDD), and the Center for Epidemiologic Studies Depression Scale (CES-D) showed several instruments to have acceptable specificity, sensitivity, and positive and negative predictive values for the diagnosis of depression in PD, and recommended the HAM-D for assessing depression severity and the Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock & Erbaugh, 1961) as a screening measure. The authors also suggested that depression scales be interpreted in combination with PD symptom rating scales in order to evaluate the influence of symptom overlap (Schrage et al., 2007).

Moreover, the Methods of Optimal Depression Detection in Parkinson's Disease (MOOD-PD) funded by National Institute of Mental Health indicated that adding an initial psychiatric screening procedure following the diagnosis of PD did increase the rate of initiation of depression treatment among the dPD population, but suggested that there was no significant subsequent reduction in rates of depression within the sample (Busch et al., 2011), suggesting that other factors may limit effectiveness of depression treatment for PD population.

In the course of their RCT of a CBT intervention for dPD mentioned above (Dobkin et al. 2011), the authors noticed that geographical and physical limitations presented major treatment access difficulties for many of the PD patients involved in the recruitment phase of the study. Roughly 20% of the patients enrolled in the study required special travel arrangements in order to be present for in-person meetings, and the primary reason for study exclusion was restricted mobility due to the patients' geographical distance from the study site or the travel limitations imposed by patients' physical disabilities (R.D.D., personal communication).

Overcoming dPD Treatment Barriers

Telehealth treatment.

Telehealth, in which medical or mental health treatment is delivered remotely via telephone, videoconference, e-mail, or other digital technology, is an increasingly popular means of overcoming geographical, physical and other access barriers for patients with a variety of chronic medical and mental health conditions (Glueckauf & Ketterson, 2004; Guler & Ubeyli, 2002; Liss, Glueckauf & Ecklund-Johnson, 2002). Telehealth has been shown to be cost-effective (Cryer, Shannon, Van Amsterdam & Leff, 2012; Wennberg, Marr, Lang, O'Malley & Bennett, 2010) and has been used to deliver education, promote coping skills, and offer support for patients suffering from diabetes, hypertension and multiple sclerosis (Guler & Ubeyli, 2002). A videoconference-based telehealth program was recently used to deliver subspecialty care to PD patients living in remote areas with promising results (Dorsey et al., 2010). Telehealth interventions have also proven effective in delivering mental health treatment for depression (Andersson & Cuijpers, 2009; Mohr et al., 2005), particularly in chronic medically ill populations (Dorstyn, Matthias & Denson, 2011). Telephone-based CBT protocols have shown particular promise in treating depression in chronic medically ill patients and their caregivers (Glueckauf et al., 2012; Himelhoch et al., 2011; Mohr et al., 2000; Mohr, Hart & Vella, 2007). A meta-analysis of telephone-based interventions for depression suggests that these treatments yield substantial symptom reductions with lower drop-out rates than face-to-face therapy (Mohr, Vella, Hart, Heckman & Simon, 2008).

Based on these findings and the existing empirical support for telephone-based CBT interventions for depression in medical populations, Dobkin and colleagues adapted their face-to-face CBT for dPD protocol to a telephone-based format with the intention of creating an

intervention capable of overcoming some of the treatment barriers identified above. Namely, the telephone format sought to take advantage of the feasibility and interest in telehealth treatment reported by PD patients in order to circumvent geographical, financial and physical barriers to face-to-face treatment. Additionally, since mental health services are often disproportionately concentrated in densely populated metropolitan areas, leaving patients residing in rural areas isolated from care (Bull, Rathbone-McCuan, & Shreffler, 2001; Rural Assistance Center, 2014), the telehealth format provided PD patients access to therapists with a level of expertise in PD and evidence-based psychosocial treatment that might have been difficult to find in certain geographic locations. In addition, this telehealth treatment format might reduce the overall cost of treatment for some patients by eliminating expenses involved in special travel arrangements and long-distance travel.

Like the face-to-face protocol, the telephone-based CBT for dPD protocol involved 10 weekly treatment sessions, and also included four optional over-the-phone educational sessions for patient caregivers. Caregiver sessions were intended to address executive functioning deficits in dPD patients by promoting caregivers' ability to help patients utilize CBT coping skills during and after treatment (Dobkin et al., 2011b). Given the significance of caregiver participation and baseline executive functioning in predicting treatment response in the face-to-face RCT study, the hypothesis that increased caregiver participation might mitigate the impact of executive functioning deficits seemed highly plausible.

In a pilot study (Dobkin et al., 2011b) in which 21 dPD patients and their caregivers received the telephone CBT (TH-CBT) intervention, participants demonstrated a significant and sizable reduction in depressive symptom severity (mean HAM-D change = 7.91 points, $p < .001$, Cohen's $d = 1.21$), and significant improvements in anxiety symptom severity and cognitive

coping ability. In addition to being effective, the telehealth treatment format demonstrated high feasibility: 95% of participants completed the protocol, study participants experienced their therapists as highly empathic and rated the treatment as very helpful, and study therapists were able to competently administer the protocol over the phone as measured by the Cognitive Therapy Rating Scale (Young & Beck, 1980). This TH-CBT trial and the RCT of the face-to-face CBT intervention yielded comparable within-group effect sizes for depression symptom reduction, study completion times and treatment response rates (Dobkin et al., 2011b).

Guided Self-Help Treatment for Depression in Parkinson's Disease

Guided self-help (GSH) mental health treatments typically involve less contact between patient and therapist and supplement this contact with written or recorded treatment materials provided in hard copy or in digital form. The therapist's role in GSH is to assist the patient make sense of treatment materials and apply the concepts or skills provided in these materials to their particular context. GSH treatment is often delivered using telehealth technology (e.g. telephone, e-mail, videoconference, web resources) and often consists of CBT or other structured, empirically-supported treatment modalities (Cuijpers, Donker, van Straten, Li & Andersson, 2010).

Like telehealth, GSH has been gaining favor in recent years due to its ability to provide low-cost, effective treatment to patients who may otherwise have difficulty accessing care (Newman, Szkodny, Llera & Przeworski, 2011), and some evidence shows that it can significantly reduce therapists' time investment without sacrificing treatment efficacy (Wright et al., 2014), an enormous benefit given the growing evidence of a vast worldwide shortage of mental health care resources (Kessler et al., 2009).

GSH has an expanding evidence base demonstrating its effectiveness in treating a number of mental health disorders. One meta-analysis of 21 studies in which GSH interventions were compared to similar face-to-face studies for anxiety and depression demonstrated a slight advantage in treatment outcome effect size for GSH treatments and no differences in drop-out rates between the two treatment types, and GSH treatments targeting mild to moderate depression were demonstrated to be effective (Cuijpers, Donker, van Straten, Li & Andersson, 2010). In addition, GSH approaches have been shown to be effective in treating medically ill populations (Voerman et al., 2015) and older adults (McKendree-Smith, Floyd & Scogin, 2003). For example, a study of 31 adults aged 60+ which compared 12 to 20 sessions of individual CBT with David Burns's *Feeling Good* bibliotherapy protocol—in which participants review written treatment materials covering standard CBT topics (e.g. behavior activation, cognitive restructuring) and receive brief weekly telephone calls from study therapists—showed that both treatment conditions produced greater reductions in depressive symptom severity compared to a waitlist control, and at 3-month follow-up, the bibliotherapy condition had a non-significant advantage in depression symptom severity over the individual therapy condition (Floyd, Scogin, McKendree-Smith, Floyd & Rokke, 2004). Notably, a meta-analysis of GSH CBT protocols provided some evidence that the largest treatment effects are associated with studies in which support is delivered over the telephone (Farrand & Woodford, 2013). Taken together, these data suggest that a GSH adaptation of Dobkin and colleagues' previously piloted TH-CBT treatment protocol might be able to increase the intervention's reach and impact while maintaining its well-documented efficacy.

In addition to the general advantages of GSH described above, adding a GSH component to Dobkin's TH-CBT protocol seemed particularly appropriate for the dPD population because

the provision of written materials in GSH is a plausible means of mitigating the negative impact of PD patients' executive dysfunction on treatment outcome, particularly if caregivers were involved in review of written materials. It may be that the continued improvement of the bibliotherapy condition relative to the individual therapy condition in the study by Floyd and colleagues (2004) described above was in part due to the availability of *Feeling Good* written materials as a reliable reference which these older adult participants could refer to in dealing with ongoing or recurring depressive symptoms.

Based on the evidence supporting the efficacy of GSH treatment approaches and this modality's potential for addressing treatment barriers specific to the dPD population, Dobkin and colleagues created a GSH adaption of their TH-CBT protocol for dPD, henceforth referred to as GSH-dPD, and implemented a preliminary pilot study with promising results, followed by two RCTs, of the GSH-dPD protocol to assess its feasibility and effectiveness. The author treated the patients that are profiled in this text during the course of these research studies. The methodological details of these studies are described further in the Methods section of this text.

The Current Study

The clinical case study has been a popular means of organizing clinical data since psychology's inception (Bromley, 1986), and the vivid detail and evocative power of Freud's early case studies still resonate with many in the field (Breuer, Freud, Strachey & Bernays, 1895). However, the influence of empirical methodology in applied psychology, epitomized by the randomized controlled treatment trial, has grown in recent decades, and proponents of this approach have criticized the premise that anecdotal clinical experience should serve as the basis for clinical judgment, pointing to its disregard for the limits of an individual clinician's

subjectivity, its lack of generalizable predictive power, and its inability to help clinicians discriminate between relevant and irrelevant factors in a given case and guide reliably sound clinical decisions (Meehl, 1954). These theorists propose that the truest and most useful basis for clinical decision-making is arrived at through a deductive approach in which statistical analysis of experimental data gleaned from studies of representative samples is used to draw general conclusions about what treatments work for whom (Baker, McFall & Shoham, 2009; Wilson, 1996). The widespread use of the empirical approach to knowledge generation in psychology, medicine, and all sciences, is testament to its power and appeal.

However, other theorists argue that the predominance of this deductive empirical approach in applied psychology has led to a disconnect between clinical research and clinical practice. These authors posit that research has difficulty usefully informing clinical practice due to the fundamental differences in the project of empirical research and the context of clinical practice: in clinical research, the questions to be answered can be chosen carefully a priori, and the scope and conditions of investigation restricted in order to limit the influence of confounding variables, while in clinical practice, the questions to be answered are determined by the clients needs and cannot be pre-determined by the therapist, and effective practice requires understanding the patient in their full context (Peterson, 1991). Thus, the empirical approach has been criticized for disregarding individual variation in favor of making general claims about a sample or population, which, while useful in describing overall trends, have unclear application to individual patients (Persons and Silberschatz, 1998). Although empiricists have made efforts to incorporate the influence of variation in moderating (e.g. differences in demographic variables within the sample) and mediating (e.g. differences in the course of treatment between members of the sample) factors in their program, critics argue that the number of moderating and

mediating variables that can be included in empirical analyses without a substantial loss of power is small compared to the number of potentially relevant variables to be considered in a given treatment case. They further argue that this limitation in the range of variables considered in empirical studies leaves a substantial gap between the problems clinicians are faced with and the tools empirical research can provide to assist them (Westen, Novotny & Thompson-Brenner, 2004).

Although the case study and the randomized controlled trial may seem irreconcilable methods of generating clinical knowledge, several authors have begun to imagine ways in which deductive empirical research and clinical case studies might productively inform one another, and have proposed the Pragmatic Case Study (PCS) method as a complement to the empirical approach (Fishman, 1999; Fishman, Messer, Edwards & Datillio, 2017). The PCS approach takes the systematic case study as the principal unit of inquiry, and seeks to incorporate qualitative and quantitative data relating to case context, process and outcome in each case study (Fishman, 2002). This approach further proposes that these case studies be compiled and cross-referenced based on relevant case characteristics (e.g. patient demographics, presenting problem, treatment modality) so as to create a case database in which cases of varying similarity might be easily grouped and compared. Rather than beginning with general conclusions derived from a population sample and applying these findings to individual patients, the PCS method, on the strength of its case study database, has the potential to work in the other direction, inductively deriving broad general based on analysis of similar case studies within the PCS database (Fishman, 1999). The PCS method thus has the potential to function as a feedback loop from clinical application back to basic psychological science, providing information about the way that treatments which have been validated in highly controlled research environments operate in

community practice, and generating new clinical questions to be pursued by empirical science. In addition, even before the number of case studies sharing a pertinent set of similarities has reached statistical power, the PCS method can provide clinicians with a vast repository of relevant cases described in fine clinical detail, which may aid in clinical decision-making on questions which empirical science is not yet able to offer best practice guidelines.

This project represents an attempt to apply PCS methodology to cases from two studies of the GSH-dPD treatment protocol with the intention of a) generating pragmatic case studies with the potential to be incorporated into the PCS database, b) use PCS methodology to extend Dobkin and colleagues' work on barriers and facilitators of treatment in the dPD population to, and c) to generate hypotheses regarding effective clinical decision-making within the context of the GSH-dPD protocol that may be useful in helping future clinicians tailor their implementation of this treatment to the needs of particular patients.

The exit interviews performed as part of these case studies are intended to add a complementary layer of qualitative data from two important perspectives, that of the patient and that of the caregiver. Part of the rationale for case studies is the premise that comparing the perspectives of multiple individuals involved in a shared experience is a useful way to make meaning out of this experience. The information provided in these interviews may clarify this writer's existing case conceptualization, treatment course, and mechanism of outcome, and help generate hypotheses regarding the facilitators of and barriers to effective treatment relevant in these cases. The specific areas of inquiry addressed by the interview questions are in part based on prior work by Dobkin and colleagues which assessed predictors of treatment success in CBT for dPD (2012) and assessed barriers and facilitators to treatment in the PD population (2013),

and in part based on the cumulative clinical experience of study therapists implementing the GSH-dPD treatment.

Methods

Study Overview

All participating individuals received the GSH-dPD treatment program in addition to treatment from their regular physician. It was hypothesized that participants would report decreases in depression, anxiety and negative thoughts and improvements in sleep and quality of life, and that caregivers would report reduced burden after following study participation.

Participants

Potential participants were recruited primarily through neurologists at the Movement Disorders Clinic at Rutgers-Robert Wood Johnson Medical School (RU-RWJMS), and additional patients were recruited from physicians in the department of psychiatry and internal medicine. RU-RWJMS neurologists gave Dr. Dobkin and other study team members permission to discuss the study with potential participants in the context of a medical appointment. Physicians in the department of psychiatry and internal medicine described the study briefly to their patients and invited them to contact Dr. Dobkin. Additional participants were recruited in the following ways: a) advertising placed in local print media, b) flyers in various locations throughout the community (e.g. public libraries, medical waiting rooms, senior centers), c) announcements made by the New Jersey Chapter of the American Parkinson's Disease Association, in addition to local PD support groups, d) study notices placed on websites, including ClinicalTrials.gov and Michael J. Fox Foundation for Parkinson's Research Fox Trial

Finder, e) recruitment letters sent to community-based neurologists. Patients were screened over the phone to determine their suitability for the study, and eligibility was confirmed at an in-person intake meeting. The study treatment was provided free of charge to all participants, and in addition, participants received \$25 in compensation for each study assessment they completed. A designated caregiver (e.g. a family member or friend who has regular contact with the participant) was asked to assist the participant in completing the study, and this caregiver completed a separate statement of informed consent and screening process.

Inclusion and exclusion criteria for the study were assessed over the course of the preliminary screening and intake meeting, and are as described below. Participants were required to: 1) have been given a diagnosis of Parkinson's disease by a general neurologist or Movement Disorders Specialist, 2) be 35-85 years of age, 3) meet criteria for Major Depression, Dysthymia, or Depression Not Otherwise Specified based on the Structured Clinical Interview for DSM-IV (SCID-I) (Spitzer, Gibbon & Williams, 1998), 4) show mild to moderate degree of illness as indicated by a score of "Slightly Ill" or "Moderately Ill" on the Clinical Global Impressions - Severity Scale (Guy, 1976), 5) have had a stable medication regimen for 6 or more weeks prior to initiation of the program, and 6) have had no change in mental health treatment in the past 2 months.

Participants were excluded from the study if they: 1) endorsed suicidal plans or intent, 2) displayed insufficient cognitive faculties, as indicated by a score below 26 on the Mini-Mental State Examination (Folstein, Holstein & McHugh, 1975), 3) reported significant motor symptom fluctuations (i.e. motor symptoms poorly controlled for 50% of the day or more), 4) reported other unstable medical conditions, 5) met criteria for Bipolar Disorder, Psychotic Spectrum

Disorders, or Substance Abuse Disorders, 6) were already receiving CBT treatment, or 7) had already participated in a K-23 treatment trial conducted by the principal investigator (PI).

Caregivers were required to: 1) be 25-85 years of age, and 2) have regular contact with study participant. Caregivers were excluded if they: 1) reported suicidal ideation, plans or intent, 2) reported an unstable medical or psychiatric condition, or 3) showed signs, based on clinical history and presentation at intake interview, of significant cognitive impairment.

Intake Process

Following the preliminary phone screen, interested participants and their caregivers were invited to an in-person intake session in which they reviewed and signed a statement of informed consent, their eligibility assessment was completed, and the participant's neurocognitive functioning, psychological diagnostic status (see "Quantitative Outcome Measures" below) and medical stability were assessed, and demographic information (e.g. age, ethnicity, occupational history, medical history, psychiatric history) for both participant and caregiver were collected. In addition, this meeting served as an opportunity for patients and their caregivers to develop rapport with study team members and to ask any outstanding questions regarding the study. Neurocognitive measures, including the Montreal Cognitive Assessment (MoCA) (Nasreddine et al., 2005), were administered at the intake session to determine study eligibility.

Those participants and caregivers who met all eligibility criteria, signed informed consent and remained interested in study participation at the end of the intake session were enrolled. Enrolled participants received a brief orientation to the GSH-dPD program and their personal copy of the treatment manual at the end of the intake session.

Consent Procedures

All participants and caregivers read statements of informed consent, and afterwards were provided with an explanation of the study's objectives, procedures, the benefits and risks of participation, and measures taken to protect confidentiality and provide financial compensation. The statement of informed consent gave participants and caregivers the option to agree or decline to have phone sessions audio-recorded for training and treatment fidelity purposes. Participants were told that their participation in the study was voluntary and that they had the right to end participation at any time. Participants were informed that their current medical treatment would not be impacted if they chose to decline or discontinue study participation. Following this explanation, any outstanding questions from participants and caregivers regarding the study were answered in detail. When participants and caregivers stated they had no further questions regarding the study, they were asked to sign and date the informed consent forms, and these forms were also signed and dated by the investigator. Copies of signed consent forms were provided to participants and caregivers. No study procedures were conducted prior to signature of informed consent.

Participants and caregivers who agreed to participate in the exit interview following study completion were asked to sign a new statement of informed consent based on the original GSH-dPD consent form, but including additional language briefly describing the nature and purpose of the exit interviews.

GSH-dPD Treatment Program

The GSH-dPD treatment program consisted of 10 modules focusing on psychoeducation and CBT skill development in a range of areas relevant to the dPD population, enabling

treatment to be flexibly tailored to the needs of individual dPD patients. Treatment modules provided psychoeducation on dPD and covered behavioral activation, activity scheduling, cognitive restructuring, anxiety/stress management, and sleep hygiene. This material included didactic content, illustrative vignettes, written exercises to support implementation of the modules' skills and concepts at home. The treatment workbook was designed to be clear, concise, user-friendly, and tax the executive functioning capacities of participants as little as possible. Participants were instructed to complete one module per week (roughly 60 minutes to complete each module plus practice exercises throughout the week) with the help of their caregiver. All participants engaged in 60-90 minute telephone sessions with trained CBT therapists on an approximately weekly basis to review progress with the self-help program, with additional contact provided as needed. All caregivers received brief phone calls from study therapists every other week to discuss ways in which the caregiver might best facilitate the participant's engagement with and benefit from the treatment program. To the extent possible, phone sessions with patients and caregivers were audio recorded for training purposes and to monitor treatment fidelity.

Quantitative Outcome Measures

Assessments of psychodiagnostic status and caregiver distress were conducted at the in-person intake meeting (T1), at the midpoint of the treatment program (approximately 6 weeks after intake (T2), immediately after completion of the program (approximately 11 weeks after intake) (T3), at a follow-up timepoint (approximately 15 weeks after intake) (T4), and in the case of the GSH-dPD RCT study, at a second follow-up timepoint (approximately 35 weeks after intake) (T5). The details of these outcome measures are described below.

At each evaluation time point, patients' depression and anxiety symptom severity were measured using two semi-structured instruments—the HAM-D and the Hamilton Anxiety Rating Scale (HAM-A) (Hamilton, 1959)—and one self-report measure—the BDI. In addition, caregiver distress was measured via the Caregiving Distress Scale (Cousins, Davies, Turnball & Playfer, 2002), a self-report measure. At all timepoints aside from intake (T1), the HAM-A and HAM-D were administered over the phone by study team members and the self-report measures were sent to the patients via e-mail, fax or post, and returned to study team members in the same manner. All study evaluators were trained extensively in the administration of the two semi-structured instruments; the PI created a standard set of questions and coding key for each measure. In the GSH-dPD RCT study, evaluators were blind to whether patients were participating in the treatment condition or control condition. Study evaluators' ratings were compared to the PI's own ratings until adequate inter-rater reliability was established, and reliability was periodically checked in a similar manner throughout the study.

For each time point, the assigned CBT therapist, in consultation with the PI, reviewed data from the BDI and HAM-D along with the evaluator's clinical impressions to determine a rating of the participant's degree of improvement in depressive symptoms relative to baseline, as measured by the Clinical Global Impression – Improvement (CGI-I) rating scale. Treatment response at T3 and T4 were defined as a 50% reduction in depressive symptom severity as measured by the HAM-D, or a score of “Much Improved” or “Very Much Improved” on the CGI-I.

Exit Interview: Selection, Recruitment and Procedure

Participants were selected as candidates for exit interviews, and inclusion in this case study presentation, based on several factors. First, participants who completed the GSH-dPD program more recently were preferred candidates, since it was assumed that this would aid in the accuracy and quantity of qualitative data produced by participant, caregiver and therapist in the exit interview.

Second, because one of the primary objectives of the PCS project is to generate hypotheses regarding idiographic facilitators of and barriers of treatment success for the telephone-based GSH-dPD protocol, potential candidates for exit interviews were divided into responder and non-responder groups, with responders defined by either a 50%+ reduction in depressive symptoms (relative to baseline) or a score of “much improved” or “very much improved” on the Clinical Global Impressions-Improvement scale at T3 or T4. The list of responders and non-responders was organized in order of recency of study completion, since it was presumed that more recent study completers would remember more of their treatment experience, leading to richer responses to exit interview questions. Given this project's goal of exploring clinical decision-making in treatment scenarios with putative applicability for clinicians using similar protocols or working with similar populations, participant rank was further organized based on this writer's preference for cases with the potential to highlight unique or significant aspects of the treatment protocol, the dPD population, or some combination of the two.

Once responder and non-responder lists were finalized, participants on each list were contacted in sequence via e-mail or telephone, based on the contact information collected during the course of the GSH-dPD. In these contacts, the participants and caregivers were told that their

participation in the interviews was being requested in order to collect feedback regarding the GSH-dPD study in the interest of improving the study protocol and better understanding the particular strengths and challenges of the PD population. Caregivers and participants were told that information from the interview could be published as part of the interviewer's dissertation, but that any such publication would be expunged of all identifying information. Participants and caregivers were offered \$25 as compensation for their participation. Participants and their caregivers on the responder and non-responder list were contacted in sequence until two responders and two non-responders had agreed to participate. The two responders and their caregivers are referred to, respectively, as GM (the patient) and JM (GM's husband and caregiver) and WJ (the patient) and YJ (WJ's wife and caregiver). The two nonresponders and their caregivers are referred to, respectively, as JY (the patient) and KY (his wife and caregiver), and FJ (the patient), whose caregiver did not participate significantly in treatment, and thus is not named in this text.

Participants and their caregivers who agreed to be interviewed were asked to sign a statement of informed consent (see "Consent Procedures" section above). This author conducted exit interviews were conducted by telephone with participants and caregivers. The exit interview structure involved a set of standard questions asked of each participant and their caregiver, with follow-up questions asked at the discretion of the interviewer. Exit interview question content is described below in "Qualitative Data".

Qualitative Data

In the interest of creating rich, nuanced accounts of each case and gathering sufficient contextual material for interpretation and analysis, the quantitative data described above was

supplemented by qualitative data in the form of exit interview data, case notes and case impressions associated with each of the four participants (and their caregivers) who agreed to participate in the PCS project.

Exit interview questions focused on the experiences of the participant and caregiver in the GSH-dPD program, their perspectives on important barriers to and facilitators of treatment outcome, their functioning since the end of the program, and the extent to which they have employed concepts and skills from the intervention since completing the program. The standard set of questions used as initial prompts during each of these exit interviews is provided in Appendix II.

In addition to exit interview information, case notes and impressions of this writer (who served as the study therapist for each of the presented cases) were added to the qualitative dataset. Case note material included initial case conceptualization, module session plans, records of each treatment session (e.g. approximate length of call, module material that was emphasized/deemphasized, patients' reports on their mood, homework assignments devised for the coming week based on program material), and the documented content of regular supervision sessions in which these cases were discussed with Dr. Roseanne Dobkin, Ph.D., who supervised this writer on all cases described.

Confidentiality

All patient contact information, demographic information, neurocognitive data, and quantitative outcome data was originally recorded in hard copy, and then transferred to a digital data management system to aid in data analysis. Data collection forms, data base files and audio recordings of phone sessions and exit interviews did not include identifiers other than the

participant's Study ID Code. All hard copy data and patient information was kept in a locked filing cabinet in a locked office at RU-RWJMS, and all information in digital format (quantitative data, treatment process notes, phone session recordings, exit interview recordings, and exit interview transcripts) was maintained in a secure database (password-protected file on a password-protected computer) in a locked office. A list linking subject names to Study ID numbers was kept separate from other data and will be destroyed once data entry is completed. Only the PI and study research personnel had access to research data, and all personnel completed research trainings on research ethics and privacy protection mandated by the RU-RWJMS Institutional Review Board and the U.S. Department of Health and Human Services, Office for Human Research Protections. These confidentiality procedures were outlined for patients on all statements of informed consent, and patients were notified that they had the right to request their audio recordings be destroyed at any point in time. All research data and audio recordings will be destroyed after 10 years.

Data Analysis and Case Presentation

In presenting the results of the cases profiled, a 'Guiding conception,' detailing the theoretical framework underlying the GSH-dPD and TH-CBT treatment approach used in each case is presented. Additionally, an outline of the principal topics covered in each treatment module of the treatment is included in Appendix III. For each case presentation, qualitative data and pertinent individual quantitative data were organized in a manner based on the standard PCS format (D. Fishman, personal communication, February 25th, 2015), which entails: a) Identifying information, b) Presenting problem, psychiatric history and assessment, c) Quantitative data, d) Diagnoses, e) Case formulation,, and g) Course of treatment...The pieces of

clinical data highlighted and the manner of analysis and/or interpretation used was tailored to each case, however, in all cases, data analysis and interpretation were guided by the intention to a) illuminate clinically relevant idiographic variables and their interrelation, b) generate hypothesized mechanisms of treatment outcome, b) analyze barriers to and facilitators of treatment success in the context of the GSH-dPD treatment modality and the dPD population.

GSH-dPD Protocol Guiding Conception

The GSH-dPD treatment protocol is based on the theoretical principles of cognitive behavioral therapy, originally developed by Aaron T. Beck (Beck, 1967) and later elaborated and refined by many others (Hollon & Beck, 1994; Kendall & Kriss, 1983; Linehan, 1993). This theoretical perspective holds that emotions, thoughts and feelings are interrelated, and that depression arises and is maintained in large part through the influence of an individual's thoughts and behaviors. Beck's model of depression emphasizes the important role of negative thoughts in depression, and proposes that depressive thinking can be understood as a layered structure: at the most global, fundamental level are 'core beliefs,' (e.g. "I cannot cope," "I am unlovable," "The world is dangerous"), which underlie 'intermediate beliefs' and 'conditional assumptions' about the world (e.g. "If I try to engage with others, I will be embarrassed," "other people will always let me down"), and at the most superficial level, 'negative automatic thoughts.' Negative automatic thoughts are conceived as specific manifestations of the deeper cognitive structures that occur spontaneously during the course of daily life, and are available to consciousness. Negative automatic thoughts are frequently based on 'cognitive distortions,' i.e. overly negative interpretations of situations, which is seen as a consequence of the depressive condition. Categories of negative thoughts have been identified based on the type of bias or distortion.

Patients' behavior is also seen as contributing to the origin and maintenance of depressive symptoms. Lewinsohn's model of depressive etiology (Lewinsohn & Graf, 1973) suggests that frequently a depressive episode is precipitated by a change in life circumstance that prevents an individual's participation in rewarding activities. This individual then begins to develop negative cognitions (see discussion of Beck's cognitive theory above) that maintain the individual's disengagement from rewarding activities (e.g. "if I try to play baseball again, my Parkinson's disease symptoms will prevent me from enjoying myself"), which maintains low mood. Mowrer's two factor model (Mowrer, 1951) explains the relationship between anxiety and depressive symptoms, and between thoughts and behaviors: it posits that when negative expectations are created in a certain situation (e.g. when a PD patient first experiences tremors in public, and feels embarrassed), anxiety may be present in situations that resemble the original unpleasant experience (e.g. other social settings) through the process of classical conditioning, and that avoidance of these situations (i.e. not attending social events at all) will be negatively reinforced as per the principles of operant conditioning. Many PD patients experience anxiety in a variety of situations as a result of their physical symptoms of PD, avoid potentially rewarding experiences, which promotes depressive symptoms through the process described by Lewinsohn's model.

The TH-CBT and GSH-dPD programs strive to teach patients to be more aware of negative automatic thoughts, catch them when they occur, and where possible, replace them with more accurate or more productive thoughts, a process called cognitive restructuring. Cognitive behavioral theory holds that as patients improve their ability to recognize and replace their automatic negative thoughts, these thoughts cease to maintain depressive symptoms, and their mood improves. In addition, the program seeks to improve patient's mood and reduce anxiety

by increasing patients' engagement in meaningful and enjoyable activities, and by encouraging patients to face their fears by putting negative predictions to the test where possible, either through cognitive restructuring or behavioral experiments.

The cognitive and behavioral techniques described above form the core of the TH-CBT and GSH-dPD programs, and are central to cognitive behavioral therapy for depression. The protocol was adapted to address the needs of the PD population in two main ways. First, due to the high rates of anxiety in the PD population (Dobkin et al., 2011), supplementary skills designed to help patients manage anxiety and worry were included. These skills include various relaxation strategies designed to make use of the five senses, and a variety of cognitive and behavioral worry control techniques. In addition, the protocol emphasizes educating caregivers about program concepts and skills as a means of mitigating the impact of PD patients' executive functioning deficits on their skill acquisition. Program skills and concepts are presented in the modules using examples designed to relate to the experience of PD patients (e.g. negative automatic thoughts that involve catastrophic predictions about future functional capacity).

Results

GM Case Study

Identifying information.

GM presented for treatment as a 70-year old, married, domiciled, retired, Caucasian woman living in Central New Jersey who had been diagnosed with PD 9 years prior to intake (2006), and reported increasing struggles with depression and anxiety during the preceding year and a half. GM worked as an office administrator for about 30 years. GM stated that for most of her life, she had always been a "happy, energetic person" and kept a full social calendar,

particularly focused on involvement at her church. However, since her PD diagnosis, she had noticed significant reduction in her comfort and interest in socializing with people besides her husband.

GM's caregiver for the study, her husband JM, was a 69-year old, Caucasian, retired male living with GM. JM reported no prior psychiatric history, and stated that his medical history included well-controlled high blood pressure and high cholesterol.

GM and JM had known each other for 45 years and reported no significant marital discord. GM and JM had one daughter who was married and living in Hawaii. GM and JM reported a very close relationship with their daughter throughout their lives, and GM stated that she spoke with her daughter over the phone on a daily basis.

Presenting problem, psychiatric history and assessment.

During the year and a half prior to intake, GM reported feeling "sad a lot" and "spending a lot of time in bed, crying", and stated that she had felt "very sensitive" to setbacks and disappointments. The patient reported very little engagement with activities or other people aside from her husband, and stated that during the preceding year and a half, there were several periods lasting weeks in which she rarely left the house, depending on her husband to run errands and do much of the housework. GM's depressive symptoms included depressed mood most of the day more days than not, persistent anhedonia, poor sleep, difficulty concentrating, poor appetite, and loss of weight. GM reported being highly focused on and distressed by her PD symptoms (e.g. poor balance, slow and halting speech, and cognitive difficulties), particularly when she spent time in public. At baseline, her HAM-D score was a 19, her BDI was a 23, her HAM-A was a 19, and her CGI was a 4 (Moderately Ill).

GM did not report having been diagnosed with any psychiatric illnesses prior to intake aside from depression, but during the intake she reported having experienced 10-15 panic attacks in the past. Most of these attacks occurred roughly 4 years prior to intake, while the most recent attack occurred several months prior to intake. She described the “first few” panic attacks as coming ‘out of the blue’, and stated that all attacks lasted about 5-10 minutes. Her symptoms included racing heart, profuse sweating, difficulty concentrating, and “tunnel vision.” Largely as a result of these panic attacks, GM and JM decided that she would not drive about 4 years ago, and at the time of intake, GM had only recently resumed driving after three years hiatus. GM also stated that her first panic attack occurred at a crowded PD event, and that following the onset of panic attacks, she began to avoid crowds, and went through periods in which she did not leave the house. GM also met DSM-IV-TR criteria for Generalized Anxiety Disorder: she stated that she spent roughly 30% of her waking hours worrying about her daughter’s health and safety, her husband’s health and her own health. GM reported that these worries caused significant distress (e.g. frequent crying spells) and impairment (e.g. difficulty focusing on other activities). GM did not meet criteria for other current or past psychiatric disorders.

At baseline, GM’s scored a 19 on the HAM-D, a 23 on the BDI, and a 19 on the HAM-A, indicating moderate depressive and anxiety symptoms. Correspondingly, GM received a CGI score of 4, indicating a “Moderately Ill” psychiatric status. JM’s baseline score on the CDS was a 22, indicating a moderate degree of caregiver burden. GM scored a perfect 30 on the MMSE and a 26 on the MoCA, indicating at least moderately strong cognitive functioning.

Diagnoses.

Axis I: Major Depression, Moderate, Single Episode (296.32); Panic Disorder w/ Agoraphobia (300.21); Generalized Anxiety Disorder (300.02)

Axis II: None

Axis III: Parkinson's Disease (ICD-9 Code 332)

Axis IV: GAF Score: 55

Case formulation.

Based on the intake information and the guiding conception of this treatment, I conceptualized GM's depression as originating from the stress and functional impairment of her Parkinson's symptoms, which lead to disengagement with rewarding activities (e.g. exercise, socializing, church involvement). I saw GM's depression as maintained by a self-reinforcing cycle of negative interpretation of her experiences and further withdrawal from rewarding activities. GM endorsed automatic negative thoughts like "It will be embarrassing for my friends to see me in the state I am in," and "I can't handle the challenges of being involved at church like I used to," intermediate beliefs like "engaging in activities I have used to enjoy will put me in physical danger or risk embarrassment due to my PD symptoms," and the core belief "I am fundamentally flawed." These thoughts contributed to GM's depressive symptoms by increasing her reducing her self-efficacy and reducing her engagement in activities that might have improved her mood.

At intake, GM's behavioral avoidance and anxiety about activity engagement were significant: GM reported a recent period of several months during which she had rarely left her house. Prior to this period, GM had been heavily involved in church activities and other social

engagements because she “had trouble saying no,” and became overwhelmed by the cognitive and physical demands of these activities. GM’s period of extreme disengagement is conceptualized as an overgeneralized response to negative experiences.

In addition, GM’s husband, JM, played a significant role in reinforcing GM’s worries about activity engagement and facilitating her avoidance by compensating for GM’s lack of activity or otherwise minimizing GM’s anxiety through participation in ‘safety behaviors’ (e.g. accompanying GM outside the home, speaking for GM in social settings), and by rewarding GM for her behavioral avoidance (e.g. comforting GM and justifying her avoidance of social engagement when she became anxious at the prospect of interaction).

Course of treatment.

Module 1.

At the outset of Module 1, GM reported a mood rating of 3/10 (10=best) over the last week, stating that she had been crying frequently, feeling overwhelmed, and spending a great deal of time in bed. She reported significant concerns about her own health and the health and safety of her daughter, who was married and living in HI with her husband.

Module 1 is the longest module in the protocol, and offers significant psycho-education regarding the etiology of depression, the CBT model (relationship between thoughts, behaviors and feelings), and the basic principles of behavioral activation.

Based on my conceptualization of GM, increasing her engagement in meaningful activities seemed a logical starting point for her treatment, and activity scheduling happens to be a major focus of the first two sessions of the GSH-dPD protocol. The first half of the first session was spent explaining the CBT model to GM and JM, and the rest of the session focused

on assessing how GM had been spending her time over the last week, which of these activities she found enjoyable or meaningful and which she did not, what activities she had interest in pursuing but had not engaged in recently, and what activities had been important to her historically. During the last week, GM said she had done a few chores around the house and had gone for a brief walk around the block accompanied by JM, but had spent most of her waking hours watching TV or resting in bed. GM stated that she had enjoyed the walk, and to a lesser extent the TV shows she watched, but that most of the time she had felt listless and hemmed in. The writer explained the Pleasure Predicting Worksheet found in Module 1, which is designed to compare expected enjoyment and actual enjoyment, and for homework, asked GM to engage in two activities that had been enjoyable to her in the past, but had not engaged in for some time: going to an exercise class at a local gym, and having lunch with several friends. GM expressed significant trepidation about both activities, particularly the lunch date with her friends, stating that she imagined she would feel ashamed for her friends to see how her PD symptoms had progressed, and worried that she would not be able to communicate effectively. However, GM ultimately agreed to give these activities a try, and to rate her predicted and actual enjoyment for each activity for us to discuss at session 2.

Module 2.

In our second session, GM reported a mood rating of 4/10 (10=best) for the previous week, and endorsed persistent depression and anxiety throughout the week, for several hours each day. She stated that she had not gone to the gym because she had been too tired on the day the class was held, but had scheduled a lunch date with friends, and had been surprised at how much she enjoyed their company, and that while she experienced some with sufficient volume

and following conversation, these issues had been much less significant than she had expected. She rated her Expected Pleasure as a 30 and her Actual Enjoyment as a 70. I validated GM's courage and effort, and asked GM to consider whether the discrepancy between her expectations and her actual experience in this instance might also be true of other activities she had eliminated from her schedule.

We spent significant time discussing the idea of "Acting In Accordance With Goals And Not Feelings," a Module 1 concept which proposes that when someone feels depressed, if they wait to do Activity X until they "feel like" doing it, they may never do Activity X, and that overcoming emotional barriers to activity engagement by just "getting started" in spite of them may be the best way to change their mood, since it allows their feelings to be guided by the activity, rather than the other way around. GM and I, with JM's help, spent significant time identifying past instances in which this dynamic may have been at work for GM, focusing particularly on her two homework assignments from the previous week: she had not "felt like" going to the exercise class or to meet her friends, but in the latter case, she felt obliged not to disappoint them, pushed herself to "get out the door," and ended up feeling much more comfortable than she expected to after 15-20 minutes of conversation. We discussed this experience as an example of GM's feelings "following" the activity. We speculated on whether she might have been similarly pleasantly surprised by the experience of exercising had she pushed herself to get to the gym, and decided to include a trip to the gym as well as attendance at her church's women's group to her weekly activity schedule for the coming week, with these activities framed as 'experiments' to test the "Acting In Accordance..." idea.

At the end of Module 2, we revisited the cognitive model and discussed the role that thoughts/interpretations play in guiding feelings, and went through several examples described in

Module 2. GM and JM seemed to get caught up in the details of the examples and assessing whether they matched GM's literal experience. In an effort to find a more relatable example, I presented a hypothetical comparison between GM's actual mood preceding her lunch date with friends, and what GM's mood would have been if she knew she was going to enjoy her lunch with her friends as much as she eventually did. This seemed to aid GM's understanding, and paved the way for a discussion of the Thought Log as a tool for recording thoughts that are associated with negative mood and behavioral avoidance. GM was asked to compile, with JM's help, a list of thoughts that were associated with negative mood over the coming week for homework, in addition to the exercise session and attendance at the women's group.

Module 3.

At the outset of Module 3, GM reported a mood rating of 5/10 (10=best) for the previous week, and stated that she had felt "a little bit" more energetic, although she continued to have crying spells and bouts of intense anxiety and sadness at times.

In reviewing the homework from the previous week, it became clear that GM had gone above and beyond her activity scheduling assignment: she had exercised twice (rather than once, as assigned), attended the women's group at church, had arranged another lunch meeting with friends, and made plans to attend a play the following week. Both GM and JM expressed growing confidence in GM's autonomy and her ability to navigate social situations. In particular, GM had decided to use her walker while attending her weekly activities, and although she had been fearful about "looking frail" in front of friends and acquaintances, several people had congratulated her on how well she looked, and having the walker had significantly allayed her fears of falling while out of the house without JM.

GM and JM reported having difficulty relating to many of the distortions listed in Module 3, and during our in-session review of cognitive distortions, I struggled to help GM generalize from the specifics of the provided examples to the concepts the distortions were meant to capture (e.g. catastrophizing = focusing on the worst possible outcome), and GM expressed feeling overwhelmed by the number and complexity of the distortions. When GM and I went over her Thought Log homework, GM had made a number of entries that were associated with sad and anxious feelings over the last week, but in session, she had difficulty putting her thoughts into useful forms (i.e. evaluable statements about the world, future or self). I provided examples of revisions of GM's thoughts that were better suited to assessing their degree of distortion, but despite my best efforts, it was clear that GM and JM did not understand the rationale behind the revision, and GM and JM struggled to apply cognitive distortion categories to these revised thoughts. I worried that GM might feel invalidated or criticized, and decided to shift emphasis from general principles to specifics. Since many of GM's thoughts seemed to be negative predictions about the future, I decided to focus on several Thought Log examples of 'catastrophizing' in an effort to solidify GM's understanding of this particular thinking pattern. GM seemed to feel more relaxed focusing on a single distortion, and was able to recognize 'catastrophizing' in her anxieties around activity scheduling in earlier weeks.

Since our discussion of cognitive distortions had bogged down, and I got the sense that GM and JM might have been feeling somewhat alienated by the abstraction of the discussion, I sought to compensate by asking GM whether there was anything she wanted to discuss. GM reported that a great deal of her distress over the last week, and in general, involved worry and sadness over her daughter's life circumstances. GM's daughter had married a veteran whose spending and drinking habits made GM very worried. In addition, her daughter's husband

suffered from infertility and also carried genetic risk for a rare but debilitating congenital disease, and GM was very concerned that her daughter might not be able to conceive, or that her child would be unhealthy. In addition, GM felt that the number of homeless individuals living in her daughter's neighborhood put her daughter's safety at risk. GM stated that she talked to her daughter twice a day, and that when her daughter did not call when she expected her to, she became deeply concerned that something terrible had happened to her (e.g. she had been attacked). Socratic questioning suggested that GM might be overestimating the likelihood of some of the feared outcomes she imagined, and I saw an opportunity to revisit the idea of distorted thinking.

One of the thoughts GM had written in her Thought Log was: "She [GM's daughter] walks on the beach where homeless people live." In analyzing the implicit message in this thought, GM and I came up with two related thoughts: "If I'm not on the phone with my daughter, something bad might happen to her and no one would know or be able to get help," and, "If I my daughter doesn't call, it is likely that something bad has happened to her." Given the fact that daughter was not on the phone with her for most of the day and nothing terrible had happened to GM's daughter yet, GM agreed that it seemed like a stretch to suggest that her daughter was in danger as a result of not being on the phone with GM. During this discussion, GM frequently GM reframed her thought to, "It is unlikely that anything terrible will happen to my daughter if we are not on the phone."

As of session 3, GM had been talking to her daughter an average of twice per day. JM felt that GM was "too attached," and suggested that GM might feel less anxious if she had somewhat less contact with her daughter. GM expressed concern that reduced contact would put her daughter in danger. I suggested, that based on our analysis of GM's negative thoughts about

the connection between her daughter's safety and their level of telephone contact, there seemed to be little evidence that less phone contact would be dangerous, and GM ultimately agreed to an experimental trial test her negative predictions in which she would speak with her daughter 1x/day until our next session. I suggested that JM be present for the calls if possible, since JM had expressed feeling "out of the loop" of communication with her daughter, and I also sensed that JM might be able to help remind GM of evidence against her fears if they were roused by statements their daughter made. In addition to this homework assignment, GM and I agreed that she would exercise twice and schedule two social events.

Module 4.

At the outset of Module 4, GM reported a mood rating of 7/10 (10=best) for the previous week, and stated that she was "feeling a good deal better" than she had at the beginning of treatment. When I asked how she explained the change in mood over the first few weeks of treatment, GM cited how much she was enjoying engaging with friends, the church community, and regular exercise, and how relieved she felt that some of her feared predictions about how she would be received in these communities (e.g. that she would be regarded with pity, or be unable to communicate effectively) had not been confirmed.

In reviewing GM's activity scheduling for the previous week, it became clear that she had surpassed the assignment we had discussed: she had exercised twice, gone to a play with friends, started attending a yoga class, taken in a concert at church, and attended two church meetings designed to prepare church members to begin volunteer work with other parishioners in hospice care. She had rated each of these activities on the Pleasure Predicting Worksheet as more pleasurable than she had expected, and several by wide margins.

GM and JM felt that prior to the program, GM had taken on too much responsibility at church because she had “trouble saying no”, but GM stated that reconnecting with her friends at church and identifying a way to “give back” in a way that was commensurate with her capacities (i.e. through the church’s hospice volunteer program) was deeply gratifying to her.

In reviewing GM’s homework assignment to reduce her contact with her daughter, GM initially focused on how difficult it was for her to relinquish contact, and that JM’s presence on the calls had helped her cope with this distress. I tried to validate GM’s experience, and then focused attention on the question of whether there was any evidence that the reduction in contact between GM and her daughter had put her daughter in greater danger. GM allowed that there had been nothing that her daughter had said that had suggested an increase in danger, but still felt that she would feel less worried if she had more contact with her daughter. Based on JM’s participation in the conversation, he suggested that their daughter might find her mother’s worrying during their calls upsetting, and suggested that their daughter frequently said things that fueled GM’s anxiety during their calls, which GM would often ruminate about after the calls were finished. I suggested that if this were true, more calls might actually increase GM’s anxiety. Session ended before we were able to finish this inquiry.

GM was asked to maintain her current level of activity, add activities if warranted, read Module 5, and record at least three thoughts on the Thought Log to be discussed at our upcoming session.

Module 5 & module 6.

At the beginning of sessions 5 and 6, GM rated her mood over the previous week as a 7/10 (10=best). Over this two-week period, she continued to engage in exercise (2x/week), the

women's group and hospice volunteering through church, and socialized with friends. In addition, at GM's midpoint assessment, her HAM-D score was a 12, and her BDI score was a 14, and her HAM-A score was a 15, suggesting a moderate improvement in her symptoms.

Because the discussion of GM's homework assignment involving her phone calls with her daughter had taken up a great deal of time during session 4, I decided focus on the cognitive restructuring strategies described in Modules 4-6 in sessions 5 and 6. GM was able to grasp the idea that examining the accuracy of thoughts associated with negative mood might be useful in improving mood, but getting the thoughts on her Thought Log into a form that could be evaluated continued to be a challenge. For example, GM's negative thoughts were often written as descriptions of her mental state (e.g. "I was worrying about my daughter's safety"), rather than first-person statements capturing the distressing thoughts she was having in the moment. I worked to try to help GM convert these phrases into evaluable statements corresponding to her original experience (e.g. "My daughter will get hurt if she walks around in her neighborhood"), but GM frequently expressed uncertainty about whether these thoughts did in fact capture her experience, and had trouble generating evaluable negative thoughts on her own. In addition, when we turned to sample negative thoughts taken from Modules 4 and 5 with which to practice generating the "evidence for and against" restructuring technique, the hypothetical nature of the thoughts seemed to be an obstacle for GM, as she often provided evidence consistent with her actual experience, rather than the imagined situation we were discussing.

Because GM's improvement in mood seemed clearly tied to her increase in behavioral activation, and because it seemed that GM had actually been able to disconfirm negative thoughts through activity scheduling (e.g. through socializing with her friends, she recognized that her fear that her PD symptoms would make her friends uncomfortable was unfounded), I

decided not to belabor the cognitive restructuring aspect of the program in a formal way. Instead, I opted to emphasize the way in which GM's activity scheduling had served as "behavioral experiments" that tested her fears, and focused on the "cost/benefit analysis" approach to evaluating negative thoughts.

GM's assigned homework was to read Module 7, continue her activity scheduling, and monitor her negative thoughts using the Thought Log.

Module 7.

At session 7, GM reported her mood rating over the previous week as an 8/10 (10=best). She stated that aside from brief periods of sadness and worry related to two calls with her daughter, her mood had been consistently "excellent" since our last session. Again, GM related her good mood to engagement in rewarding activities, particularly her volunteer work with members of her church community under hospice care.

GM was able to apply "cost/benefit analysis" to her worries about her daughter, as per her homework assignment, with a great deal of help from JM.

After a call in which her daughter described the inconclusive results of a medical test designed to assess her ability to conceive a child, GM experienced intense anxiety associated with worries about her daughter's ability to conceive, and was able to recognize that her worries had no bearing on whether her daughter would in fact be able to conceive, and had the potential to negatively impact her mood. As an alternative to her worrying thoughts, she decided to focus instead on an engrossing activity with JM.

GM and I spent much of session 7 discussing which relaxation techniques she might add to her set of coping skills. GM stated that she was concerned about using the guided imagery

recordings, since she felt that she would have too much trouble operating the audio technology. Although I had my doubts that this was truly the case, it seemed important to let GM assert her preference in treatment after our difficulty with cognitive restructuring, so GM and I agreed to focus on Progressive Muscle Relaxation and Complete Natural Breathing for the following week's homework. Since anxiety had primarily been an issue in the context of GM's relationship with her daughter, and since GM had some questions about what to do once she had applied "cost/benefit analysis" to worrying thoughts during our discussion of this technique in the previous session, I framed relaxation exercises as ways to divert GM's attention away from worrying thoughts that she had identified as counterproductive through "cost/benefit analysis."

I asked GM to practice one session of Complete Natural Breathing and Progressive Muscle Relaxation each day during the coming week, in addition to reading Module 8.

Module 8.

At the outset of session 9, GM's mood rated as 9/10 (10=best), and continued to report increased activity and reduced worry as the foundation of her positive mood. In reviewing her homework, GM stated that she had not remembered to Progressive Muscle Relaxation and Complete Natural Breathing every day, but she reported that Complete Natural Breathing had been useful in one instance when the cat and dog had gotten in a fight, which had caused GM much distress. Seeing her distraught and crying, JM had suggested that a relaxation skill from the previous week might be helpful, GM had chosen to use Complete Natural Breathing, and found herself much calmer after 5 minutes of breathing practice. GM seemed worried that I might be disappointed that she had not practiced relaxation exercises daily as I had suggested. I assured her that she had shown great diligence in reading, processing and implementing the skills

and concepts in the program thus far, and that the purpose of the homework was not just to complete it for the sake of completion or my appeasement, but to figure out what skills worked for her and which did not, which I thought she had done successfully in using Complete Natural Breathing during an anxious moment. This discussion seemed to reassure GM to some extent, although she continued to lament not having followed through on her homework.

Module 8 emphasizes worry control and sleep hygiene, and we decided to bypass the latter topic since GM reported regular and restful sleep (roughly 8 uninterrupted hours per night). Thus, most of session time was spent focusing on supplementing GM's relaxation techniques with worry control techniques. GM struggled with many of the worry control suggestions, particularly Scheduling Worry Time, in which the patient attempts to restrict worrying to a short designated period of the day, and asking 'What's The Worst That Could Happen?', which asks the patient to examine their thinking to determine whether they might be overestimating the likelihood of negative outcomes. However, GM was interested in the idea of writing her worries down, as she had kept a journal as a young person, and felt that putting her thoughts to paper had helped her manage difficult times during adolescence.

Module 9.

At the outset of session 9, GM rated her mood over the previous week as a 9/10 (10=best), stating that, as in recent weeks, her mood was supported by her involvement in activities.

In session 9, I focused on helping GM shift her thinking from a negative thought to a reframe thought without rehashing the , starting with the thoughts that we had most recently worked on relating to her daughter, and moving on to negative thoughts she had mentioned

earlier in treatment. GM stated that she was not having many of these thoughts (e.g. worries that her friends would be distressed by her physical and cognitive limitations) anymore, so I presented our work on these thoughts as preparation for the possibility that similar thoughts might return in the future. Perhaps against my better judgment, I wanted to give GM and JM another chance to take the lead role in discussing the session material, but the discussion of the nuts and bolts of cognitive restructuring (e.g. formulating the reframe thought as a direct response to the negative thought). I decided that it was better for them to have some examples of GM's typical negative thoughts and well-formulated reframe thoughts rather than to spend time trying to help GM and JM improve their grasp of cognitive restructuring or take charge of the session, so I went through my session notes, identified the negative thoughts that had been most central to the treatment as well as their reframes, and compiled them in a document for GM and JM to keep. GM and JM thought this was a good idea, and decided to put the list in a prominent location in their house to help GM catch her negative thoughts.

GM was asked to read Module 10 and continue with her activity scheduling before our next session.

Module 10.

At the outset of session 10, GM rated her mood over the previous week as a 9/10 (10=best). She continued to report positive mood related to her weekly activities, which included her church group, a tai-chi group, three exercise sessions, volunteer hospice work, and several dinner outings. GM also reported feeling more capable of managing anxiety related to her daughter's situation, and stated that Complete Natural Breathing and the relaxation recordings from Module 7 had been helpful in this regard.

Module 10 focused on reviewing GM's progress during the program, and discussing how GM might use skills she developed in the program to deal with future challenges. In reading through Module 10, which reviews the major emphases of each module, GM and JM noticed the degree to which cognitive restructuring skills had been de-emphasized in our sessions, and expressed some regret that they had not developed as much proficiency with this skill. I tried to emphasize the significant and consistent improvement in mood that GM had achieved without heavily relying on cognitive restructuring skills, emphasized that these skills are not useful for everyone, but also suggested that regardless of whether the formal cognitive restructuring process described in the modules was helpful to GM, she had challenged and revised her negative expectations about engaging in certain activities by experience. In addition, I helped GM reflect on her successful use of 'Cost/Benefit Analysis' in reframing her worries about her daughter. GM continued to express concern that she had not "done the program the way [I] wanted," and I tried to reassure her by saying that the writer's job was to help GM improve her mood in whatever way possible, that this goal had certainly been achieved, and reminded GM and JM that the program is intended to be a 'buffet' of skills from which patients can choose those that work best for them.

I and GM emphasized the important role that the "Acting In Accordance With Goals And Not Feelings" and behavioral experiment concepts had played in her behavioral activation, and reviewed ways in which GM could access this concept in the future, focusing on JM's role in helping GM recognize instances in which the concept might be helpful, and reminding GM of its usefulness during the program.

I reviewed the Thought Log as a way to identify negative thoughts that might be appropriate for evaluation through behavioral experiments or restructuring through 'Cost/Benefit

Analysis.' We discussed JM's role in helping GM add relevant thoughts to the Thought Log and determining which skill to use in a given situation. I proposed several hypothetical scenarios (e.g. GM's daughter mentions a health concern in a phone call that cues GM's anxiety), and asked JM and GM to choose and implement skills appropriate to these scenarios with minimal input from I. GM struggled with this task on her own, but with JM's help, was able to come up with at least one useful solution in each scenario.

Lastly, writer and GM reviewed relaxation exercises. GM expressed particular interest in Complete Natural Breathing, stating that she found it provided an effect similar to that of her tai-chi class. I encouraged GM to try to incorporate these Complete Natural Breathing into her daily routine, suggesting that regular practice would deepen the impact of the exercise, and make her more likely to remember to use the strategy in a moment of distress.

Case discussion.

From the first intake call with GM and JM, it was evident that they had a close relationship, and were interested in participating in the treatment together. Both GM and JM answered the phone at our first session, and both expressed interest in JM being present for all phone sessions. JM explained that he was very interested in learning about what GM was going through, and wanted to be present in case GM "got tired" or "needed help explaining." GM concurred that she did need help expressing herself at times, and thought it would be helpful for JM to be available to provide his input on how she had been doing.

GM and JM said they had spent several hours during the previous week reading and discussing Module 1 together, and as they discussed this experience, I was struck by the thoroughness with which GM and JM had reviewed the material, and the interest they seemed to

take in it, particularly JM. He asked specific questions about the meanings of certain terms, and seemed interested in learning the concepts covered in the program.

During our discussion of GM's activities over the previous week, JM did much of the talking, and presented GM's inactivity as an unfortunate but necessary consequence of her current condition. For example, he reported that he and GM felt he needed to escort her outside the home because she "became overwhelmed" easily, was very worried about "running into someone she knew" because she worried she would be embarrassed to exhibit her PD symptoms, and ran the risk of falling due to her weakness and balance difficulties. GM spoke relatively little, and I was unsure whether this was because she agreed with JM and felt there was nothing more to say, or disagreed to some extent, but did not want to contradict her husband. Initially, I felt hesitant to ask GM for her own thoughts for fear of seeming dismissive of JM's role as spokesperson, but it seemed necessary to assess the correspondence between GM's and JM's views on the matter if possible, and based on my perception that JM was an open, accepting, supportive spouse, it seemed unlikely that he would take offense to such questions. I expressed interest in gathering as much information as possible from each of them regarding GM's current situation, and asked GM to weigh in if she felt she had anything to add.

GM stated that she generally agreed with JM's assessment of her physical, cognitive and emotional abilities, but also mentioned that she felt quite limited by them, as she had formerly been a very active member of the community, particular in their church congregation, and had taken great pleasure in her independence.

As our conversation continued, it became clear that these assessments about GM's abilities had not been tested in quite some time, if ever. Based on my conceptualization, helping GM engage in rewarding activities was essential, and to do so, it seemed important to test

whether GM and JM's beliefs about her ability (or lack thereof) to function independently were accurate. However, it was clear that JM had been playing a close supervisory role for some time, and I became conscious of two concerns regarding JM's role in GM's treatment: a) that JM would feel that testing the limits of GM's abilities would put her in undue danger, and b) that JM would feel a sense of loss at having his role diminished.

In Module 2, GM and I worked on scheduling pleasurable and meaningful activities for the following week. In focusing on this agenda, I worked hard to present a clear rationale for pursuing these activities that I hoped would justify any risks that GM or JM perceived to be involved. I focused on the pleasure GM reported deriving from these activities in the past (attending church groups, volunteering in the community), the idea that her ability to manage these situations had not been tested in some time, and that she might be more capable than she or JM thought. In addition, I tried present a method for minimizing risk, emphasizing that the three of us would collaborate to choose the activities assigned for homework, and that we could start with activities that seemed at the outer limits of GM's perceived abilities, and use GM's experience in these activities to guide the "degree of difficulty" of future activity scheduling.

Although GM and JM initially voiced some concern about GM being "pushed too hard" in certain areas (particularly activities that taxed her mobility and balance, like exercise classes), as we discussed the incremental and collaborative nature the activity scheduling would take, they warmed to the idea. As the precedent for soliciting GM's opinion had been set in the last session, I mentioned that one initial "test" we could perform would be to see how GM handled taking on more of the speaking role in our sessions. I stated that I did not want GM to be uncomfortable, and would check in with her to see if the extra talking was making her tired, but that I felt it was important for her to push herself in order for us to determine where her limits

really were. In addition, I emphasized to JM that asking GM to participate more did not mean that I was not interested in his perspective, and asked that he speak up when he saw fit. I made an effort to solicit her opinions more and more often in Module 2, and by the end of the session, she was speaking nearly as much as JM. In addition, I praised JM when I saw him restraining himself from 'coming to GM's rescue' when she seemed to be having a bit more trouble than usual formulating a thought, and also praised him when I felt he offered support or his own perspective at the right time.

At times, I struggled to understand GM's speech, partly due to chronic telephone connection issues, but also due to a tremulous, halting quality in her voice that made it difficult to discern. Based on our discussions at intake and session 1, I knew that GM was self-conscious about her speech, but I tried to be honest when I had trouble understanding her, and to ask her to try again rather than turning to JM, as long as her fatigue was not too extreme, expressing to them that a) vocal exercise might improve the strength of her voice, and b) it was very important for me to hear about GM's experience in her own words when possible. She did report being tired towards the end of session 2, but also that she enjoyed the opportunity to share more of her experience.

During session 2, JM made several remarks to the effect that he was surprised and interested by GM's description of her experiences (e.g. her feeling of shame around her perceived difficulty in communicating and emotional sensitivity). Given the strong bond between JM and GM, I was surprised by JM's surprise, and began to wonder about the interpersonal dynamics that might have limited his awareness of GM's thoughts and feelings. Based on GM's reported vulnerability to emotional overload and "embarrassment" over her sensitivity, I hypothesized that the intensity of her distress might make it difficult for GM and

JM to talk about what was going on when she was upset (GM stated that prior to the program, she spent a lot of time crying), and that when GM was feeling better, her sense of shame about her reactions to stress might discourage conversation about her experience in high-stress moments, making it difficult for JM to get a clear picture of GM's internal experience.

My perspective on the dynamic between GM and JM at the outset of treatment was further clarified by my exit interview conversation with them. JM stated that "Before program, it was very hard for me to get anything out of her...she would be up in bed in the fetal position...now she is willing to talk to me...and we're able to talk [these issues] through." In addition, during the exit interview, JM stated that his approach to dealing with GM's intense distress was to try to "fix it," and that he would often become frustrated with GM when there was not a clear and immediate solution to be found. For her part, GM mentioned that she tended to get frustrated with JM when he took the 'fix it' approach, because she really just wanted to be "listened to." Based on this information, one imagines a dynamic in which GM is punished for sharing her experience (since she experiences JM's typical response as unhelpful), and JM is punished for engaging with GM about her distress, since his attempts are rejected and seem unsuccessful. Although I did not fully realize this during the treatment, in hindsight it seems that my efforts to elicit more of GM's perspective as a means of testing her limits may have inadvertently changed JM's perspective on GM's illness by giving him a chance to hear what it was like for her when she felt upset. In addition, because my therapeutic style emphasized information gathering and empathic reflection in addition to problem solving, I may have been able to model a different way of relating to GM's distress for JM.

In sessions 3 and 4, as GM increased her activity level, GM, JM and I took a look at how these changes were impacting GM and their relationship. Luckily, GM's experience in pursuing

Daily and Weekly goals had been overwhelmingly positive: although she had mentioned negative predictions regarding what it would be like to exhibit PD symptoms in front of friends and acquaintances, and had doubts about how her memory and conversational ability would affect her social functioning, she received very positive feedback from her social network (e.g. she reported that most people focused on how glad they were to see her and how much her presence brought them joy), and clearly derived a great deal of pleasure from her reinvigorated social life.

Structural family systems theory (Minuchin, 1974) suggests that significant change in the attitudes and behavior of one member of a couple or family system may destabilize the system, and may provoke reactions on the part of other members of the system that are designed to restore the system's previous equilibrium, regardless of the level of dysfunction in the prior equilibrium. Since GM was now spending significantly more time separate from JM, I was concerned that JM might feel bereft of companionship or a sense of gratification in tending to GM's needs, and tried to be attuned to behavior on the part of JM that might function to restore the status quo (e.g. expressing concern for GM's physical safety in these new environments, and suggesting that she reduce her involvement in these activities or that he accompany her). On the other hand, although JM never complained about his role in supporting GM, and presented his efforts in this area as a labor of love, I also tried to be sensitive to any indication that a reduction in caregiver burden was occurring as a result of GM's increase in autonomy and activity level.

On the whole, I observed little to none of the former and plenty of the latter. In addition to being pleased at the improvement in GM's mood that seemed tied to her increased activity level, JM seemed genuinely surprised at the sense of freedom he experienced as he and GM developed confidence in her ability to operate more autonomously, and in a caregiver session

following our 5th session, remarked that our discussion of the importance of meaningful and rewarding activities to GM's mental health had led him to consider adding new activities to his own schedule, and that with GM's increasing activity level and reduced dependence on him, he felt he had the time and energy to follow through with some of these plans, which included spending time participating in a vintage car club, exercising more regularly, and spending more time with friends. JM's score on the Caregiving Distress Scale was a 22 at baseline, and showed mild to moderate distress across a range of areas (e.g. impairment). His scores at subsequent time points were 11 (5 weeks), 8 (endpoint - 10 weeks), and 5 (follow-up - 15 weeks). This pattern suggests a significant reduction in caregiving-related distress, and, given JM's increased engagement in non-caretaking activities during this time, supports the hypothesis that behavioral activation on GM's part freed up JM to engage in his own behavioral activation, leading to improvement in mood for both of them.

In parallel to the shifts in autonomy and responsibility that JM and GM were exhibiting outside of session, the in-session dynamics during our calls began to reflect GM's growing confidence, and JM's growing awareness of the benefits of encouraging GM's independence within reasonable limits. In Module 7, there was a moment epitomizing this shift in which GM had been asked whether Progressive Muscle Relaxation would be of interest to her, had not answered immediately, and JM began to speak for her, but caught himself. GM eventually was able to answer the question, and her answer caught JM by surprise: he had assumed that she would not feel comfortable with the rigors of the PMR, and was about to express this, when in fact GM said that based on her experience in exercise and tai-chi classes, she felt comfortable giving PMR a try as a homework assignment. JM reflected on the violation of his expectations with good humor, and said "I sure learn a lot when I keep my mouth shut." I offered GM and

JM my perspective on the shift in their relationship and the positive consequences of this shift, which they appreciated.

The situation in which a caregiver has taken on a great deal, and potentially an unhelpful degree, of responsibility in their caregiving role, is anecdotally a common one in treatments of medically ill patients, and presents an interesting set of clinical challenges and opportunities. Often, such a dynamic has arisen as a natural strategy for coping with loss of functional abilities on the part of the patient, but overcompensation on the part of the caregiver can be a barrier to the patient's improvement if it prevents the patient from participating in meaningful and rewarding activities that they are capable of, or undermines their sense of self-efficacy and confidence.

If the patient seems likely to benefit from behavioral activation, but the patient and caregiver's understanding of the patient's capacities seems to limit behavioral activation options, one question to consider is: "To what extent has the caregiver overcompensated for the deficits of the patient?" In the case of JM and GM, I had an early inkling that GM might be capable of more autonomy than she was showing because much of her disengagement seemed rooted in negative predictions that had not been put to the test, and were not supported by evidence (e.g. believing that she would feel too overwhelmed and be incapable of communicating effectively in social situations without JM's help).

This is not always an easy question to answer, and answering it may involve some risk to a) clinician-patient rapport (e.g. if patient resists taking on more responsibility), b) clinician-caregiver rapport (e.g. if caregiver sees the clinician's request that the patient try taking on more responsibility/autonomy as unnecessary, dangerous to the patient, or threatening to the caregiver's role), c) the caregiver-patient relationship (e.g. if the shift in responsibility leaves the

caregiver feeling bereft of a sense of purpose, which they then take out on the patient, or if the patient takes out the added stress of being asked to “push their limits” on the caregiver), or to d) the patient’s physical safety (e.g. if the area chosen to test the patient’s need for the caregiver’s support actually poses some risk to the patient, like driving). In general, a clinician may be able to mitigate these dangers in several ways: threats to clinician-patient and clinician-caregiver rapport can be managed by being open and honest with patients about the rationale for testing the patient’s capacity to take on new activities and responsibilities, attempting to anticipate some of the clients’ concerns (e.g. safety issues for patient, a lost sense of purpose for caregiver), and encouraging clients to provide feedback to the clinician about their experience of these experiments. In addition, threats to the patient’s safety and related rapport issues may be addressed by gathering collateral information about the patient’s capabilities, like asking the patient’s neurologist or primary care provider whether they feel like the patient is physically fit to drive a car, or has the balance to manage a crowded subway car safely. This can help the clinician feel more secure that activity scheduling will not jeopardize patient safety, and also serve as a way to validate the patient and caregiver’s safety concerns.

FJ Case Study

Identifying information.

FJ presented for treatment as a 42-year old, divorced, employed, Caucasian man living in Central New Jersey who had been diagnosed with PD 6 months prior to intake (2014), and reported struggling with significant depression and anxiety symptoms since then. FJ stated that he had always “hated school,” was a mediocre student throughout high school, and had taken some college courses, but had not completed a college degree. At the time of intake, FJ was

employed as a sales representative, and stated that he had worked in this capacity for most of his professional career.

FJ reported intermittent contact with his mother, but stated that he did not have close relationships with the rest of his family of origin. FJ had a 12-year old son with his recent ex-wife. His ex-wife had primary custody of the child and lived within driving distance of FJ. FJ spent every other weekend with his son. FJ reported having few social connections at intake, and we decided that the best candidate for a study caregiver was his mother, although he was not interested in her participating significantly in his treatment.

FJ did not report significant medical history aside from PD. He stated that since his diagnosis, he had initiated a regimen of herbal and dietary supplements on the recommendation of a holistic healer, and was doing his best to exercise regularly, with moderate success.

Presenting problem, psychiatric history, and assessment.

When we began treatment, the patient reported that he was not experiencing significant physical symptoms of PD, but felt hopeless and fearful about the progressive nature of the disease, and spent a great deal of time ruminating about how he would deal with more advanced stages of PD. FJ characterized his mood as “terrible,” and reported that co-workers had noticed him experiencing mild tremors at work, particularly when he was feeling anxious, and that he feared he would be fired or demoted as a result. In addition, FJ stated that his work required that he maintain a grueling travel schedule, which he had found increasingly difficult in recent months due to an increase in fatigue that he attributed primarily to PD.

FJ denied having been previously diagnosed with a psychiatric condition other than depression at intake, but reported experiencing low mood and irritability more than half the time

for several years, and met criteria for Dysthymic Disorder. FJ reported that he had struggled with gambling in his 20's, and that he and others had noticed his tendency to act impulsively. FJ believed he would meet criteria for ADHD, though he had never been formally diagnosed, citing significant concentration and hyperactivity problems as a child. During the initial assessment, FJ reported that he had been prescribed nortriptyline for his depressive symptoms by his neurologist several weeks ago, but was quite dissatisfied with its impact, stating that the medication had not reduced his depressive symptoms, and that he believed it was contributing to his diminished energy.

FJ reported engaging in heavy drinking in his 20's, but had been sober for 1 year at intake. FJ stated that he regularly used a variety of recreational drugs in his 20's, but that his recent drug use was restricted to smoking marijuana roughly twice per week, which he said helped relieve his anxiety.

Diagnoses.

Axis I: Dysthymia (300.40); Generalized Anxiety Disorder (300.02); 305.00 Alcohol Abuse in Sustained Full Remission

Axis II: None

Axis III: Parkinson's Disease (ICD-9 Code 332)

Axis IV: Problems with primary support group, Occupational problems, Economic problems

GAF: 53

Case formulation.

FJ's primary symptoms at intake were low mood, anhedonia, anxiety about his future in light of his PD diagnosis and life situation, and hypochondriasis related to his PD symptoms. Based on the guiding conception of this treatment approach, I conceptualized FJ's low mood and anhedonia as driven by negative predictions about the future and regrets about the past, along with an absence of rewarding activities. FJ reported negative automatic thoughts like "I will be unemployable in 10 years," "I will not be able to cope with this disease," and "my life is over." I conceptualized these negative thoughts as stemming from intermediate assumptions like "if I try to live a meaningful life with PD, I will fail," and the core belief "I am fundamentally flawed." Significant psychosocial stressors—unstable finances, a difficult relationship with his ex-wife and son, and a general lack of social support—contributed significantly to FJ's worries about how PD would impact his future. FJ's efforts to manage these stressors also reduced his ability to engage in meaningful activities. I believe these stressors also served as a barrier to the formation of a strong therapeutic alliance, since they represented differences between FJ and I that contributed to FJ's belief that I was incapable of fully understanding his predicament, and thus unable to be helpful to him.

FJ demonstrated a tendency towards extreme externalization and internalization in making sense of his difficulties: he expressed guilt and self-criticism at not having used his time prior to his PD diagnosis more productively, but also blamed his ex-wife, his healthcare providers, co-workers, and his mother for the distress he was experiencing. His internalizing tendencies helped maintain his low mood and anhedonia by generating feelings of powerlessness and undermining his self-efficacy, and his externalizing tendencies made it difficult for him to work collaboratively with others to address his symptoms.

FJ's anxiety symptoms were maintained by the catastrophic predictions described above, FJ's life stressors and the uncertainty of his PD prognosis, and the reinforcement provided by the process of worrying, which FJ saw as a necessary part of successfully managing the challenges he faced.

Course of treatment.

Module 1.

At our first session, FJ rated his mood over the last week a 3/10 (10 = best), stating that he had felt "panicked" trying to find time to visit his son (who was ill), keep up with his travel schedule for work, and prepare to sell his house, while dealing with worsening physical PD symptoms. FJ seemed particularly upset by his tremors, particularly the fact that anxiety exacerbated them. When FJ described the frequency and intensity of his tremors, they sounded relatively mild in intensity, and were barely noticeable when FJ was not feeling anxious, but their presence, and FJ's conviction that they would soon be considerably worse, were both very distressing to him. The previous week, FJ had attended a business meeting in which his sales team received feedback on their performance. Due to the evaluative nature of the meeting, FJ had become anxious, and begun to experience tremors. He had tried to conceal them from his co-workers, since they were not aware of his diagnosis, and he was intent on hiding it from them. However, he reported that his attempts to conceal his tremors made him even more anxious, which made the tremors more severe, and FJ felt sure that some of his co-workers had noticed them. I was struck by the strength of FJ's commitment to conceal his symptoms and his diagnosis, and reflected this to FJ. He stated that given his financial situation, he could not

afford to lose sales assignments or his job, and that anyone in his position would conceal their PD symptoms.

FJ said that he had looked over Module 1 quickly because much of the material he remembered from college courses in psychology. However, when we discussed specific concepts from Module 1, FJ demonstrated little grasp of them, and seemed more interested in describing the challenges he was facing in detail. I attempted to re-orient FJ to the structured nature of the program, and my interest in trying to help him develop skills to combat the issues he was mentioning. FJ initially seemed agreeable to this, but as we began to work through some of Module 1's main themes, his responses implied a lack of confidence in the efficacy of the program. For example, when I asked him what he thought of the idea of working to increase his engagement in meaningful and enjoyable activities, FJ responded with "you seem like a good guy, and I know you're trying to help, but I don't have time for nice activities." I asked him to review his activity schedule over the last week to help me understand how busy he was in an effort to validate his perspective and also advance the Activity Scheduling goals of the session. FJ described a number of essential and time-consuming activities (e.g. visiting his son, searching for a realtor and house inspector in preparation for selling his house, a busy travel schedule for work), but also made clear that he spent much of his free time conducting online research on PD, and in particular, on dietary and herbal remedies that he hoped might help alleviate his PD symptoms. He described the experience of trying to learn about PD as "overwhelming" and "paralyzing," and said that these feelings were often so strong they interfered with his ability to process what he read in the course of his research efforts. FJ also expressed dissatisfaction with the effects of the antidepressant medication (nortriptyline) he had been prescribed by his neurologist, which he said made him feel like a "zombie" and "did nothing" to improve his

mood. He said he felt very frustrated with how long he would need to wait to see his neurologist for a follow-up appointment to discuss these issues, and had been spending a significant amount of time researching alternative medications. In retrospect, I interpret FJ's exhaustive research efforts as, at least in part, an attempt to cope with feelings of helplessness. Based on FJ's description, these efforts seemed to generate more questions than they answered, thus adding to his anxiety and sense of helplessness. However, it was clear that FJ was wedded to these activities, and I felt hesitant to suggest that he substitute other activities. When I mentioned that it sounded overwhelming to sort through so much information on his own, FJ seemed offended, saying "of course it's overwhelming, I just found out I have Parkinson's." At the end of the session, we had covered very little of Module 1, and I was unsure about how best to promote engagement with the program while maintaining rapport.

Since FJ seemed interested in learning more about PD, and because I wanted to find some way of promoting positive activity engagement, I suggested that he research support groups in his area where he could learn more about PD and make connections with others in his position. FJ initially objected to this idea on the grounds that everyone at the groups would be "much older" than him, and unable to relate to his situation, and because he felt it would be "depressing" to be around people in more advanced stages of PD. However, FJ ultimately agreed to this homework assignment, in addition to reading Module 2.

Module 2.

At the beginning of our second session, FJ rated his mood over the past week as a 4-5/10 (10 = best), and when I asked about the improvement over last week, FJ stated that he had had a job interview that he thought had gone well, and had inspired him to intensify his job search.

However, he stated that he had been plagued by despairing thoughts about his future for much of the week, and felt that a sense of hopelessness, in addition to his medication and PD, had been sapping his strength, leading to low activity engagement outside of work.

FJ had attended a lecture by a local university professor on the biology of PD at a local support group, but had not stayed for the full lecture because he felt uncomfortable about being the youngest person there, and because it had taken place during the week, and he felt obligated to return to work before it ended. I was surprised and encouraged by his attendance at the group, and tried to validate his follow-through. However, FJ made clear that the group had been “depressing,” as he had expected, and that he had found it difficult to make sense of the professor’s presentation, and thus had decided not to pursue support groups for the time being. I suggested that it might be possible to find a support group that fit his interests and schedule better, but FJ firmly refused.

FJ had not read Module 2, so we spent time reviewing of the more important concepts from Modules 1 and 2. FJ questioned the importance of interpretation in determining mood, stating that he felt the reality of PD, and not his thinking about it, was the primary issue. We reviewed the “Newlyweds” example, which is intended to illustrate how interpretation of a situation can influence emotional reactions to it. FJ focused on the differences between the example and his own situation, implying that PD was clearly more challenging than a “lover’s quarrel,” but did accept that one’s perspective has some impact on how one feels about a given situation.

At the end of the session, I expressed concern that FJ seemed uninterested in the content of the program. FJ stated that he “had a lot on his mind” at the moment, and was trying his best to be engaged, but felt that he was not learning anything new, and doubted that changing

thoughts or behaviors could make much difference in his experience given the challenges he was facing. I tried to validate the reality of his challenges, and his disappointment that the modules presented concepts that he was already familiar with. I said I thought his familiarity with these concepts was a great advantage, but that if he did not put these concepts into practice outside of session, it was unlikely that the program would be helpful to him. FJ agreed, and said he would try to spend more time on the program, but said he had “so many other things to do” that it would likely be difficult. I asked if he thought it was the right time for him to participate in the program, and assured him that if this was the case, he should not feel pressure to continue, and could return to the program in the future. FJ said that he was committed to the program, and would engage to the “best of his ability.”

In the final third of the session, we discussed the central role of the Thought Log in the cognitive restructuring component of the program. FJ declined to practice generating Thought Log entries in session, and promised that he would make at least one entry each day over the course of the next week. Given how overwhelmed FJ said he had been feeling, I was concerned that this assignment would fall by the wayside if we did not do some planning around how he would incorporate making Thought Log entries in his schedule, but I elected not to raise this issue because I felt FJ had already made concessions to my recommended approach to the program, and deserved the benefit of the doubt. In addition to completing his Thought Log entries, I asked FJ to read Module 3.

Module 3.

At the beginning of our third session, FJ rated his mood over the last week a 4/10 (10 = best), similar to the previous session's rating. FJ reported that his anxiety about his financial

situation continued to be high, since he had decided he needed to sell his house, and it had become apparent that this would be more difficult than he had originally believed because some parts of the property had fallen into disrepair and might need to be fixed before the house could be put on the market. Additionally, he had not heard back from two potential employers after recent job interviews, and worried that his current income would soon be insufficient to cover his medical bills. On top of this, he had just been notified that his water would be shut off at the end of the month and a lien placed on his property if he did not pay his water bill, which he had delayed paying while he tried to determine why it had been several times its typical rate for the past few months. FJ described this situation as a major stressor, so we spent time discussing steps he might take to determine whether he would have to pay the bill (e.g. looking for a leak, asking the town to assess whether the meter was broken). FJ expressed gratitude for being able to discuss this issue in session.

FJ had not written out any Thought Log entries, but had made mental notes of some scenarios he thought were appropriate. The first had occurred one morning when FJ was feeling particularly stiff and achy while trying to prepare himself to head to the gym for a workout, and had the thought: "I don't know if I'm strong enough to handle this." FJ described the accompanying emotions as anxiety and depression. Although the thought was not formulated in an optimally challengeable way, I was encouraged that FJ had made an effort to keep track of his thinking and its impact on his feelings, and by the suitability of the example he came up with. I tried not to praise him too effusively, as I had begun to suspect based on previous instances that he experienced this as condescending rather than reinforcing.

I suggested that we review Module 3's list of cognitive distortions to see if any of them applied to this thought. FJ had not reviewed Module 3 the previous week, and as we went

through some of the examples of cognitive distortions, he seemed to assume that my suggestion that we assess the applicability of a given cognitive distortion to his thoughts indicated that I believed these thoughts were in fact distorted. Realizing that I had not framed the concept of cognitive distortions properly for him, I emphasized that the cognitive distortions list in Module 3 was meant to describe common ways in which negative thoughts *could* be distorted, but that the 'evidence for/against' approach to cognitive restructuring, which we would be reviewing in the next session, involved examining the evidence for and against a thought before deciding whether any distortion was present. This seemed to help FJ warm to the idea of cognitive distortions, and he showed curiosity about some of the distortions as we perused the list. With some assistance, he was able to identify Fortunetelling as a cognitive distortion potentially applicable to the thought we had discussed.

For homework, I asked FJ to read Module 4, to identify one more negative thought during the course of the week, and to try to identify an appropriate potential distortion.

Module 4.

At our fourth session, FJ rated his mood over the past week a 5/10 (10 = best). He explained that an enjoyable weekend with his son had helped brighten his mood, and that he had been able to push himself to exercise despite stiffness, pain and fatigue. He stated that his financial situation and the prospect of living the rest of his life with PD continued to weigh heavily on his mind.

FJ had re-read parts of Modules 1 and 2 over the past week, and said that based on the sections describing the importance of activity goals, he wanted to focus on adding social activities to his schedule. Specifically, FJ was interested in reconnecting with old friends. FJ

stated that after receiving his diagnosis, he had made less of an effort to connect with friends because he felt he needed to “focus on taking care of himself,” but had realized that he missed having more social contact. However, FJ was concerned that his friends would be “pitying” or would be disturbed by his tremors, fatigue and bleak outlook. I suggested that these thoughts might be worth examining for potential distortions, as per Module 4, and FJ agreed, although there was annoyance in his tone, and I wondered whether I had jumped too quickly back to ‘the program.’ I did not mention my impression of his annoyance. While we were on the topic of scheduling social activities, I mentioned that I had heard from Dr. Dobkin about a Young Onset PD support group in Central New Jersey, and suggested this as an alternative to the support group FJ had previously been dissatisfied with. At this point, my sense was that FJ was still in the early stages of coming to terms with his diagnosis, and I hypothesized that if he could tolerate it, being around other PD patients that he could identify with might be enormously helpful. However, FJ said the location of the group was too far from where he lived. We discussed when, where and with whom FJ might schedule a social event for the next week, and then shifted our focus to the previous week’s homework.

FJ had read Module 4 and written several entries in his Thought Log. I suggested that we try practicing the ‘evidence for/against’ cognitive restructuring technique on his thought “I’m not sure if I am strong enough to handle this” from last week’s session. As a way to preempt FJ’s defensiveness, which I had gotten a hint of in Module 3, I reiterated that this process was meant to be exploratory, and that it was important to avoid a priori assumptions about whether a given thought was distorted. Since FJ’s thought as it had been originally stated expressed an unknown amount of doubt about FJ’s ability to handle his situation, I asked him to give me a percentage estimate of the degree to which he *did not* believe he could handle his situation. FJ stated that he

found the idea of trying to quantify the strength of his belief was “silly,” and the most specificity he could muster was “more than half.” I was more active and directive in this part of the session than I had been previously in our treatment, and I sensed that FJ might be feeling uncomfortable with this, but I decided to stick with this approach, as past experience indicated that FJ overestimated his grasp of the program concepts, and I had found the ‘evidence for/against’ technique to be the most difficult for most patients to understand. In comparing the evidence for and against his thought, FJ was able to come up with a number of pieces of evidence supporting the thought, though several of them were other negative thoughts (e.g. “I will be unable to work soon”). However, he drew a blank when I asked him to think of evidence that contradicted the thought. I suggested some possible pieces of counter-evidence (e.g. “so far, I have been able to hold down a job, maintain a relationship with my child, and maintain a home while coping with PD symptoms”). FJ did not believe that this evidence was accurate, and detailed the ways in which he felt his performance at work was poor and deteriorating, that he was dissatisfied with the amount and quality of the time he spent with his son, and that he was unable to maintain his home if he was in danger of having his water shut off. I tried to emphasize that my example was meant as a hypothetical example to demonstrate what counterevidence might look like, and that if FJ did not feel it was strong evidence, then it would not be helpful to include it. FJ was clearly quite upset, and went on to say that he trusted that I was trying my best to be helpful, but felt I was not fully comprehending the challenges he was facing, and was unsure about how helpful the program would be.

Realizing I needed to backtrack further, I emphasized that the ‘evidence for/against’ approach was one of several cognitive restructuring options, and although it had been helpful for many people, we could focus on other strategies if it was not helpful for him. I mentioned that

some of these alternative strategies would be presented in Module 5, and referenced where in this module he could find information on these strategies. FJ agreed to give Module 5 “a look,” but seemed cold and disengaged for the rest of the session, which I decided to end early.

Module 5.

At the beginning of our fifth session, FJ rated his mood over the previous week as a 5/10 (10 = best). He said that he was feeling better than he had the previous week, and apologized for being “cranky” at our last session. I thanked him for his apology, and said that I felt I had failed to hear his concerns fully, and hoped to do a better job adapting the program to his needs. FJ believed that his anxiety might be a bigger problem than his depression, and had recently made contact with a psychiatrist specializing in treatment of anxiety. I asked him to describe his anxiety, and he stated that he felt he was in a constant state of panic about trying to get things done “before it’s too late,” and that “staying as busy as possible” was the best way for him to deal with his anxiety. He estimated that he had “10 good working years left,” and felt pressure to make as much money as possible during this time to ensure that he would be able to pay for his son’s college education. FJ also said that he had so much on his plate that it was hard to decide where to start, and that he spent a lot of time “spinning his wheels.” I mentioned that there were relaxation exercises and worry control techniques included later in the program, and that we could review these components earlier in the program if he was interested. FJ said that this was unnecessary, and that he wanted to see if the psychiatrist could help with his anxiety first. I was concerned because the terms of the research study request that patients abstain from altering their medication regimen if possible, but I felt concerned about how he would react if I brought this

issue up, and since he did not yet have an appointment with the psychiatrist, decided to revisit the issue in the next session.

FJ said he had briefly reviewed Module 5, but again seemed unfamiliar with some of the other cognitive restructuring concepts described therein. I decided to focus on the 'cost/benefit analysis' and 'what would you tell a friend' techniques, since I worried that the 'worst case/best case/most likely scenario' approach might be frustrating to FJ given its similarity to the 'evidence for/against' skill. Wanting FJ to feel as much in control of the process as possible, I asked him to pick a thought he had recorded in the Thought Log to use in practicing these techniques. FJ chose the thought "I won't be able to work in 10 years." FJ reported feeling a mix of anxiety and helplessness in connection with this thought over the last week. When I asked him what the costs and benefits of focusing on this thought might be, FJ cited "motivation to make money now" as the primary benefit, and could not think of a cost. I told FJ that it had sounded to me like his anxiety might have been exacerbated when he attended to this thought. FJ responded that it was his situation that made him anxious, and that he had no choice but to think about it and deal with it. I worried that FJ was again feeling like he was not being heard. I mentioned my concern to him, expressed my sincere desire to avoid a confrontation, and asked him how he would like to proceed. FJ stated that he did feel annoyed, because he felt that the interventions he had learned so far had been designed to ignore the negative aspects of his situation and force him to "just think positive." Focusing on the 'cost/benefit analysis,' skill, I said I entirely agreed with the need to be realistic about his challenges, I understood that he derived motivation from the challenges he was facing, and that the idea of this skill was not to ignore these benefits, but to check to see if there instances in which a given thought might be counterproductive, e.g. by making him feel more hopeless, or making him feel so anxious that it

was difficult to actually take action. FJ seemed partially mollified, and stated that there were times when he did feel so anxious that his concentration was affected, but affirmed that for him, the motivating power of this thought outweighed its cost in anxiety. I framed our 'cost/benefit analysis' of this particular thought as successful in that we had ascertained that the benefits of the thought outweighed the costs.

However, based on the fact that he had expressed interest in reducing his anxiety psychiatrically earlier in the session, and his description of his anxiety leading him to "spinning his wheels," I strongly suspected that there were moments when worries about his financial future led to unhelpful emotional consequences without providing him significant benefit in helping him handle these concerns. Looking back, I wish I had not acted on this hypothesis, as this could be seen as contradicting my message that it was acceptable to conclude that a given thought's benefits might outweigh its costs, even if the costs were significant. However, I was worried that I might not have many more chances to demonstrate the value of the program to FJ, and it felt important for FJ to derive benefit from this exercise. To this end, I introduced the concepts of rumination and effective problem-solving, and stated that while I understood that the thought "I won't be able to work in 10 years" was more beneficial than costly to him in general, I wondered whether there might be specific instances in which he was ruminating on this thought rather than using it to generate solutions to his financial challenges, and suggested that such instances might fit his description of feeling so anxious about getting things done that he was "spinning his wheels." FJ said such a scenario was possible, but that he could not think of any specific examples. I suggested that if he was able to identify situations in which he was ruminating on this thought and could not effectively problem-solve, he might maximize the benefit and minimize the cost of the thought, and suggested that he monitor his experience over

the next week for such instances of rumination, which he agreed to. I asked once more if FJ wanted to move the program content focused on relaxation and worry control to our next sessions given his concern about anxiety, but FJ declined, so I asked him to read Module 6 in addition to his thought monitoring assignment for homework.

NOTE: FJ subsequently informed me that he was no longer interested in continuing his participation in the study, so session 5 turned out to be our final session.

Case discussion.

FJ was the most challenging patient I encountered during my work with Dr. Dobkin for a number of reasons, but I think much of our difficulties stemmed from an interaction between FJ's approach to coping with his recent PD diagnosis, the nature of the program, and my own biases and weaknesses as a clinician. In the following discussion, I will attempt to describe these factors, my interpretation of their interplay during treatment, and the lessons I took from the treatment that I hope may have applicability to treatments with similar features.

During the intake, I began to pick up on signs of what I now conceptualize as FJ's coping reaction to his diagnosis, and they made me concerned that maintaining our therapeutic alliance would be a significant challenge. He seemed particularly interested in evaluating the competence of his healthcare providers, and at several points he generalized his specific complaints about certain providers to criticism of the profession in general. Our first session gave me no reason to revise my initial assessment: at several points, I felt like FJ was assessing me for sufficient life and professional experience, and finding me wanting. He asked how old I was, and after I responded honestly, he suggested at several points later in the session that I

would likely have difficulty understanding his experience because I was “young.” In the exit interview, FJ stated that my age and relative inexperience as a therapist led him to take a dim view of my potential to be helpful, and “not give the program a chance.”

Additionally, when I asked him about his experience reading Module 1, he said that it “hadn’t taken him very long to get through” because he had taken psychology courses in college, and the material was familiar to him. When I then suggested that we try to apply some of the concepts in Module 1 to FJ’s own situation, he seemed uninterested, and made several comments to the effect that he was unimpressed with the complexity of the ideas in the Module 1, and felt it would be more helpful to him for us to “just talk.” For example, I suggested that we review his current activity schedule with the idea of assessing what activities he might want increase, maintain or remove, he said that he did not have time for “nice activities,” and that his schedule was already full of activities that he considered obligatory.

In addition, FJ was uncomfortable with the idea of a fixed session time, stating that it “stressed him out” to be scheduled in this way, and asked if I could call him whenever I was free, and should he also be free, we could have the session. I was puzzled by this request, but when I asked FJ about what exactly felt stressful about having a fixed session time, he reiterated that it just “stressed him out,” and had trouble providing further detail. During our sessions, FJ was frequently distracted or involved in other activities (e.g. watching TV in the background, cooking dinner), and he repeatedly mentioned feeling pressed for time and “all over the place.” In talking to FJ during the exit interview, he said that at the time of our treatment, he felt like “the clock on his life was ticking” due to his PD diagnosis, and that he was coping with this by trying to get as much done as he could while he was still able. FJ further described this coping strategy as stemming from a “lack of acceptance” of his diagnosis and an unexamined fear of what life with

PD would look like, and that throwing himself into frantic activity was a means of “running away” from this fear.

FJ coping strategy seemed to deny the reality of his diagnosis, and as a result, placed unrealistic expectations on himself and others involved in his care. For example, I think FJ's complaints about certain healthcare providers not responding to him in a timely manner were valid and understandable, but FJ suggested there was negligence, and perhaps even malicious intent, behind his neurologist's prescription of an antidepressant (nortriptyline) that FJ found unhelpful, saying “they just give you this stuff to numb you out,” and “I feel like it's a big conspiracy.” Based on what FJ said in the exit interview, I think this hostility came out of understandable anger at the injustice of his having contracted PD at such a young age, and a desire to hold someone accountable for the fact of his illness. I believe this meant that he saw providers who were unable to cure him of his symptoms as responsible for them, and I inevitably fell into this category. To me, this unrealistic expectation of a cure, or difficulty accepting his prognosis, explains his a priori suspicion of the program's usefulness, his resistance to attending support groups, and his relentless pursuit of herbal remedies and dietary solutions to his symptoms. In a brief conversation with FJ's mother, who served as FJ's caregiver for the study, but had relatively infrequent contact with him, she said that he had been quite irritable and rejecting of her since his diagnosis, which leads me to believe that his anger was also directed at those who were not directly involved in his treating his PD.

In addition, FJ's difficulty in accepting his diagnosis also led him to place unrealistic demands on himself. In the exit interview, FJ explained that his discomfort with having a set session time, his tendency to be occupied with other activities during our sessions, and his reports that he often felt agitated and “all over the place” in the course of his daily life resulted

from his attempts to accomplish what he hoped to achieve in life before his symptoms left him incapacitated (e.g. providing for his son's college tuition, moving to a more suitable home). However, I believe these efforts created persistent worry that he was not getting enough done, led him to multi-task to the point of ineffectiveness (thus his sense of "spinning his wheels" and his frequent distraction during session), and made him hesitant to make time commitments that might interfere with his multi-tasking efforts (e.g. our sessions). I think the anxiety stemming from FJ's unrealistic expectations of himself and the treatment limited his ability to engage with the program in a meaningful way.

Additionally, I think the structured, change-focused nature of the GSH-CBT protocol, and the fact that the treatment was delivered in the context of a research study, were not well suited to a patient still coming to terms with their PD diagnosis. This mismatch primarily manifested itself in an ongoing tension between FJ's stated desire that we "just talk," and my sense of responsibility to implement the treatment as intended. As treatment progressed, I found it increasingly difficult to maintain our focus on the materials presented in the modules. FJ indicated that he simply wanted me to listen to and empathize with his plight, and when I tried to validate his concerns and suggested that we refer to the module for ideas on how to address them, FJ experienced this as unhelpful, and would redirect our discussion back to further elaboration of his distress and the reasons behind it. When I mentioned this dynamic in the exit interview, FJ characterized it as a manifestation of his difficulty accepting his diagnosis, stating that at the time of our treatment, he "wasn't ready to think about what to do." My interpretation of this statement is that thinking about "what to do" in a realistic way required accepting the reality of the diagnosis in a way that FJ was not prepared for.

I did my best to strike a balance between validating FJ's experience and helping him develop the skills presented in the program, but I think that certain biases and weaknesses in my clinical approach contributed to the treatment failure. First, I feel most comfortable implementing structured treatments, and at that point in my training, I had little experience and even less confidence in delivering the kind of unstructured treatment that FJ seemed to be looking for. As mentioned above, given that FJ's treatment was part of a research study, I felt obligated to be as adherent to the protocol as possible. However, I was unclear on the amount and types of modifications allowed for by the program, and I felt hesitant to ask for input on this issue from Dr. Dobkin, as I worried that she might see this as a clinical skill deficit, and ultimately went through FJ's treatment feeling pressure to err on the side of sticking closely to the protocol agenda. In subsequent discussions with Dr. Dobkin, it became clear to me that the program allowed for much more flexibility than I imagined, and that FJ might have gotten more out of the treatment had I been willing to ask for help.

I suspect that the telephone format of the intervention also worked against my capacity to convey empathy for FJ's distress, because it precludes the use of body language, facial expressions, and at times tone of voice when the telephone connection is poor, all of which I have found to be essential in communicating respect, interest and care in face-to-face therapy sessions. I have found that for me, playing a directive therapeutic role over the phone (e.g. providing psychoeducation about depression symptoms or working through a cognitive restructuring exercise) is no more challenging than doing so in person, I think because the content of the conversation is central to this task. In comparison, I find empathic listening and reflection to be more difficult over the phone, since the therapist is speaking less, and must convey information in other ways. Of course, it is quite possible to convey empathy over the

phone, and I certainly could have increased my emphasis on empathy relative to skill acquisition in FJ's treatment. However, with FJ, it would have been helpful to have as many empathic tools at my disposal as possible, and I have often wondered whether treatment might have gone differently had we conducted treatment in-person. Thus, in telephone-based treatments with patients in need of empathic support, I propose that this task may require more time and energy compared to in-person treatments, in which empathy can be conveyed through non-verbal channels.

In addition, at the stage of my training when I treated FJ, I think my skill in providing cognitive restructuring was unrefined, and I struggled to convey cognitive restructuring skills—particularly the ‘evidence for/against’ skill—in a way that did not send the message that patient's thoughts or interpretations were “wrong,” especially with patients like FJ, who were sensitive to feeling invalidated or condescended to. In particular, after listening back to our sessions, despite telling FJ that it is important to avoid making a priori assumptions about the strength of evidence supporting a negative thought, I think I indirectly sent FJ the message that I was making these assumptions. One example was in the hypothetical counterevidence I suggested might fit his negative thought “I don't think I'm strong enough to handle this” in Module 4. Although I did intend to provide hypothetical examples of counterevidence, I chose pieces of evidence that I suspected were actually applicable to this negative thought, which may have made it more difficult for FJ to see them as hypothetical, and more likely that he see me as imposing my evaluation of the validity of his thought. Given that cognitive restructuring is such an important part of the GSH-CBT and TH-CBT protocols, and can be such a powerful tool when used well, I think it is essential for clinicians to take care to be open-minded about the outcome of ‘evidence

for/against' approaches to negative thoughts when implementing these treatments with patients who are particularly sensitive to invalidation.

As we moved into the middle portion of the program, which focuses on cognitive restructuring, I found myself in a conundrum: on the one hand, I felt confident that FJ's mood was being negatively impacted by automatic thoughts ("I can't do anything," "my life is basically over") that were theoretically quite amenable to cognitive restructuring, and I felt an obligation to do my best to cover this material with him. On the other hand, at this point in treatment it was clear that FJ was sensitive to invalidation, and the more we worked on cognitive restructuring, particularly the 'evidence for/against' component, the more our already fragile rapport seemed in jeopardy. Despite the 'evidence for/against' skill's prominent place in the protocol, in FJ's case, there is reason to believe our treatment would have been more successful if we had shifted our focus to other cognitive restructuring techniques (e.g. 'what would you tell a friend') earlier, or tabled cognitive restructuring temporarily, and focused on relaxation and worry control techniques.

There are several lessons I learned from my treatment with FJ that might usefully inform clinical decision-making in other treatments with similar features. First, I think that FJ quite understandably experienced his PD diagnosis as a significant loss, and in my experience, PD patients often describe undergoing a process of coming to terms with their diagnosis that resembles the 5 stages of grief outlined by Elisabeth Kübler-Ross in her book *On Death And Dying* (Edlich & Kübler-Ross, 1992). FJ was the first patient I came across who, in retrospect, seemed to fit in the second "Anger" stage, and if I had been thinking in terms of stages of grief, given his recent diagnosis, I might have further explored with FJ and/or Dr. Dobkin his appropriateness for the study, or pursued modifying the treatment in a more significant way,

because, as FJ himself said in the exit interview, he was not ready to benefit from what the program had to offer. From the perspective of the 'Stages of Change' outlined in the Motivational Interviewing literature, I would describe FJ's perspective on coping with his PD and associated symptoms as fitting the "Precontemplation" stage, which is characterized by strong resistance to change, and denial of the feasibility or benefits of change (Miller & Rollnick, 2012). The MI approach to dealing with ambivalence involves an open exploration of the patient's reasons for desiring and resisting making a change, and aims to use the patient's own language and insights to emphasize the reasons for change while validating the importance of the reasons to resist change. It is possible that MI techniques could be used to supplement the GSH-dPD protocol for patients demonstrating high levels ambivalence about engaging in treatment, either by including a course of MI prior to beginning the GSH-dPD modules, or by encouraging the therapist to employ MI techniques as needed in the course of working through the GSH-dPD material. In the future, it would be useful to develop a procedure for assessing treatment readiness, which might include measures like the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) (Miller & Tonigan, 1996).

Thus, I would encourage clinicians working with patients who have recently been diagnosed with PD or other major medical illness, or who show signs of significant difficulty accepting a major medical diagnosis, to consider whether the patient's presentation indicates a ambivalence about pursuing treatment, and if so, whether the characteristics of the patient's ambivalence have implications for the treatment approach. In FJ's case, he received feedback from another provider that he "slow down," which for FJ came to mean: 'running from the diagnosis will not help,' and in the exit interview, he described this feedback as crucial to

helping him move beyond his anger and denial of the diagnosis, and begin to take pragmatic steps to cope with it.

Secondly, I think being aware of the potential challenges to expressing empathy or rapport development that are imposed by a telephone-based treatment, and developing ways of maintaining or repairing rapport in this treatment modality are very important for clinicians doing this work. Although empirical evidence comparing therapeutic alliance in telephone-based and face-to-face treatments does not indicate significant differences (Dobkin et al., 2011; Stiles-Shields, Kwasny, Cai & Mohr, 2014), FJ stated that the telephone format of the treatment interfered with our “one-on-one connection” and made it easier for him not to give me his “full attention.” Aside from devoting more time and energy to validating FJ, I think I could have taken other approaches to strengthening or repairing our rapport within the telephone treatment format. For example, in our fourth session, when FJ became irritated with me when I provided possible counterevidence for his thought, I regret not putting the discussion of the skill on hold, sharing my experience of the interaction with FJ, and encouraging him to explore the source of his irritation. In the absence of visual information to use in tracking the clinical interaction, it may be more important for clinicians to directly address the therapeutic process in the moment, or to check in with the patient about their experience of treatment more frequently.

Lastly, given FJ's complaint that I was too young to understand the challenges he was facing and his doubts about the cognitive restructuring skills the program presents, and his desire for empathic support, I regret not making more of an effort to help FJ find peers within the PD community that he felt could relate to his situation, and might be able to help him work towards acceptance of his diagnosis. After FJ made clear that the Young Onset support group was too far away for him to attend regularly, I think I prematurely deemphasized the goal of finding social

support within the PD community for FJ. In his exit interview, FJ stated that what ultimately helped him come to terms with his PD diagnosis was feeling inspired by the stories of PD patients with whom he could identify. Specifically, FJ described reading the biographies of the college football coach Lou Holtz and the professional cyclist Davis Phinney—the latter of whom was diagnosed at an early age, like FJ—as central to his transition from anger and denial to acceptance and pragmatic coping. It is possible that we might not have been able to find another venue in which FJ could receive peer support, either due to a lack of options or FJ's unwillingness, but I more effort was warranted given the particular challenges of the case. In seeking to understand why I did not focus more on enhancing FJ's connection to the PD community, two ideas come to mind. First, as discussed earlier, my awareness of the research context of treatment led me to feel a strong obligation to be adherent to treatment, which I believe I defined more conservatively than was necessary, which led me to focus on the skills and topics covered in the relevant module in each session. Thus, once the emphasis of the modules shifted toward cognitive restructuring techniques and away from goal settings and activity scheduling in Module 3, I focused on helping FJ learn cognitive restructuring skills rather than trying to refine and expand his activity scheduling, even as evidence mounted that he was not finding cognitive restructuring helpful. More generally, I think the context of the treatment within a research study, the emphasis on cognitive skills within the modules, and my status as a trainee led me to conceive the 'active ingredient' of change narrowly and rigidly, and tacitly assumed that the 'meatier' cognitive skill components of the program should be the keys to improvement, and had a hard time revising this assumption despite significant evidence. In retrospect, FJ gave me plenty of signals that what he needed was empathy and understanding, and that he was doubtful that I could adequately provide these things, and I wish I had had the

humility and flexibility to step back and try to help him find people who could provide this support. This speaks to a broader lesson that I continue to find applicable to many experiences implementing structured treatments: there is a great deal of flexibility and individual tailoring required even within the most structured treatment frames, and holding assumptions about the expected mechanism(s) of change lightly and in full view can help foster this flexibility.

WJ Case Study

Identifying information.

WJ presented for treatment as a 67-year old, married, domiciled, retired, Caucasian, Latino man living in Central New Jersey who had been diagnosed with PD 11 years prior to intake (2004), and reported increasing struggles with depression and anxiety during the preceding two months. WJ had completed a 4-year undergraduate degree, and worked as a federal investigator for much of his career. WJ described himself as an energetic, outgoing person who enjoyed philosophy, history and other intellectual pursuits. WJ did not endorse significant past or current medical conditions aside from PD.

WJ's caregiver for the study, his wife YJ, was a 68-year old, Korean, retired female domiciled with WJ. YJ had been diagnosed with bipolar II disorder, which she described as "stable." YJ also suffered from diabetes, which she described as "under control," and did not report other significant medical conditions.

WJ and YJ had known each other for 45 years, and reported that their relationship had been tumultuous in the past. They were separated for 10 months in 1976 in the context WJ experiencing a depressive episode. WJ and YJ had one son, who was married with a young daughter, and lived close to them. They reported being very involved in their son's life, but

stated that his financial decision-making was an area of concern that at times caused conflict in their relationship with their son, and their own relationship.

Presenting problem, psychiatric history, and assessment.

WJ stated that two months prior to intake, he had begun experiencing daily low mood, helplessness, hopelessness, poor sleep, and “paralyzing” anxiety. During this time, WJ described himself as “consumed” with worries about coping with PD, and said he had begun to “question the meaning of life.” WJ stated that fear of “losing control” due to an interaction between his anxiety and PD symptoms had severely limited his engagement in daily activities (e.g. driving, walking outside the house), and he had begun to feel “claustrophobic” at home. WJ also reported significant short-term and long-term memory problems, although my interactions with him, and reports from his wife YJ, suggested that his perception of the severity of these symptoms was exaggerated.

WJ did not report having been diagnosed with any psychiatric illnesses aside from depression prior to intake. WJ reported a history of recurrent depressive episodes. He stated that he had been depressed for several periods in his teenage years after his parents’ divorce, had had another depressive episode in 1976 in the context of marital problems with YJ, and had a “nervous breakdown” which led to psychiatric hospitalization in the late 1990’s when, he believes, he first began to experience PD symptoms. WJ reported feeling depressed “intermittently” since the late 1990’s, but noticed a significant increase in symptoms in the two months prior to intake. At intake, WJ was taking 50 mg/day of nortriptyline for depression, 1 mg/night of clonazepam for sleep, and was prescribed 0.5 mg/PRN of lorazepam for his anxiety.

He described each of these medications as helpful, particularly the clonazepam, which he felt he depended on to fall asleep.

At baseline, WJ scored a 28 on the HAM-D, a 28 on the BDI, and a 27 on the HAM-A, indicating moderate symptoms of depression and anxiety. Correspondingly, WJ received a CGI score of 5 indicating a “Markedly Ill” psychiatric status. YJ’s baseline score on the CDS was a 49, indicating a very high degree of caregiver burden. WJ scored a 24 on the MoCA at intake, indicating mild cognitive impairment.

Diagnoses.

Axis I: Major Depression, Moderate, Recurrent (296.32)

Axis II: None

Axis III: Parkinson’s Disease (ICD-9 Code 332)

Axis IV: GAF Score: 56

Case formulation.

Based on the intake information and the guiding conception of this treatment approach, I conceptualized WJ’s depressive symptoms and anxiety as developing due to the stress and functional impairment of his Parkinson’s symptoms, and being maintained through behavioral avoidance and negatively biased interpretation of his experience. In particular, WJ expressed significant fear of losing control of his body or his mind since being diagnosed with PD, and viewed himself as weak, helpless and burdensome, endorsing negative automatic thoughts like “If I drive too far from home, my anxiety will cause my tremors to get so bad that I will lose control of the car,” “I am rapidly deteriorating,” and “I cannot cope without my wife.” Due to

his anxiety about his ability to engage in a range of daily activities, at the outset of treatment, WJ had been spending much of his time in the house watching TV, which made him feel “trapped” and “depressed.” I conceive of WJ’s negative automatic thoughts described above as derived from the conditional assumptions and intermediate beliefs “If I engage in this activity, something terrible will happen” and “I can’t cope with PD,” and the core belief “I am fundamentally flawed.” WJ’s belief that he is fundamentally flawed was also reinforced by his adherence to the ‘just world belief,’ (i.e. that good things happen to good people and bad things happen to bad people), which he attributed to his staunchly Catholic upbringing.

In addition I conceive of WJ’s wife, YJ, as playing a role in reinforcing WJ’s belief in his helplessness and burdensome by voicing these beliefs herself, and also by negatively reinforcing WJ’s anxious avoidance by taking over a variety of tasks and chores (e.g. driving, doing yard work, being responsible for feeding the dog). This undermined WJ’s self-esteem, and deepened his belief that he was incapable of coping with PD and effectively engaging with life, which led to further behavioral avoidance, and prompted further criticism and reinforcement of avoidance from YJ.

Course of treatment.

Module 1.

WJ and his wife YJ were both present for our first session, and had both read through Module 1. In describing his depression, WJ identified disengagement with activities, helplessness, hopelessness, low mood, and guilt about being a burden to his loved ones. WJ also endorsed significant anxiety about engagement in a variety of activities (e.g. driving, walking by himself), and his primary fear was that he would lose control.

WJ rated his mood over the previous week as 6/10 (10 = best). WJ said he had been surprised when his PT therapist had recently told him he had improved in almost every PD symptom domain. WJ said he believed he had not been making progress, and that his outlook on life improved, albeit slightly, as a result of this feedback. I framed this scenario as illustrating an important principle of the CBT model: the interpretation of a situation, rather than the situation itself, determines its emotional impact. I also suggested that depression tends to promote negative interpretations, and that an important part of the program involved gathering information, as WJ had from his PT therapist, to help rebalance interpretations that were found to be overly negative or unhelpful, and thereby improve mood.

WJ, YJ and I discussed the influence of behaviors on mood through an example WJ provided in which he was pleasantly surprised by his ability to walk on sand without falling during a recent trip to the beach. In light of this instance, we discussed the importance of activity scheduling, and it became clear that WJ's activity level was extremely limited. WJ reported feeling worried about leaving his house, and spent much of his time watching TV. One of WJ's primary fears about going outside involved his belief that if he was in a situation he was not sure he could physically handle, his anxiety would cause his tremors to get worse, and he would eventually lose control (e.g. crash his car, fall down on the sidewalk, get lost). I suggested that if we could help WJ find a way to reduce his anxiety by testing his assumption that he would lose control, he might feel more comfortable engaging in activities.

Next, we reviewed some of the guidelines for setting activity goals outlined in Module 1. WJ stated that he would like to set a goal of walking outside more often, and we discussed how he might safely challenge his fear of falling. WJ stated that he had fallen in the past, but not for at least a year, and YJ opined that he likely had the physical capacity to go for short walks

outside, and that fear itself might be his biggest obstacle. In light of this thought, we discussed the concept of 'Acting In Accordance With Goals And Not Feelings.' WJ was less sure of his physical capacity than YJ, so we examined his daily routine to see what amount of walking he had done recently, and in what circumstances, and recognized that he had recently walked steadily for about 10 minutes over level, familiar terrain in the course of helping YJ with chores. We discussed the importance of titrating activity engagement to strike the balance between pushing himself and staying within safe limits. As an initial experiment in utilizing this concept, WJ agreed to take a walk of 10 minutes each day on level ground with YJ over the next week.

WJ expressed a great deal of interest in discussing the unconscious with me, which he saw as the source of his fearful thoughts, and wondered how these fears were generated. I emphasized that while one might conceive of his thoughts and feelings as having unconscious sources, the TH-CBT treatment program focused on improving mood and anxiety by working with conscious aspects of experience.

In addition to WJ's daily walking assignment, I asked him to rate his enjoyment of activities over the following week using the Activity Rating Worksheet, and to read Module 2.

Module 2.

WJ reported that his mood over the past week had been a 5/10 (10=best). He had not left the house as much as he had hoped, and had felt sad and listless at times, but had enjoyed several activities, including visits to a farmer's market and the boardwalk with his wife.

WJ had read through Module 2, and done a good job adding activities to his Daily and Weekly Goals worksheet. Several had turned out to be more enjoyable or feasible than he had expected. WJ and I discussed the importance of testing his predicted enjoyment of activities he

was hesitant to engage or in, or had not attempted recently, in order to see if they might be useful additions to his activity schedule. WJ had not been able to follow his plan of walking for 10 minutes each day, and had instead gone walking twice for much longer periods. On one of these days, he had attended physical therapy in addition to walking, and reported feeling very tired at the end of the day, so we touched on the importance of challenging himself but not overburdening himself and risking injury.

WJ and I discussed the concept of negative thoughts presented in Module 2, and WJ was able to provide a recent example in which pain in his legs after physical therapy was associated with predictions that this pain would prevent him from being able to sleep that night. WJ showed a good grasp of the rationale for documenting negative thoughts in the Thought Log, but struggled to frame his negative thoughts in concrete, declarative terms. WJ seemed interested in determining which component of the CBT model was most important, and had difficulty with my proposal that each was important in different ways.

We spent the last third of the session discussing WJ's Daily and Weekly Activity Goals for the next week. WJ's physical therapist had recommended that he exercise for 15 minutes each day, and he had expressed interest in biking, but worried whether he would be able to accomplish this task. WJ stated that one of his most significant obstacles in following through with exercise plans and other activities was his tendency to "rationalize" inactivity when he was feeling anxious or sad, and we discussed the usefulness of the concept of 'Acting In Accordance With Goals And Not Feelings', and the value of documenting instances in which ignoring negative feelings and persisting with an activity had a positive impact on mood. WJ seemed to feel this idea was presented in an overly simplistic way, and seemed intent on explaining to me how powerful the emotions that limited his activity were. I tried to balance validating his

experience and focusing on instances in which he had succeeded in not allowing them to limit his activity engagement.

In addition to reading Module 3, WJ's homework included adding to the exercise and social goals he had come up with for the following week, and setting aside 5-10 minutes at the end of each day to add any negative thoughts he had identified during the day to the Thought Log.

Module 3.

When I checked in with WJ at the outset of our third session, WJ said that he had been feeling "well" over the last week, but that there had been "ups and down." He rated his overall mood for the week as 5/10 (10 = best). WJ described one instance in which his wife was driving in unfamiliar area in inclement weather, and he had become very concerned they would crash. However, he had recognized that his anxiety was likely unwarranted, since they were not in a rush, and they had a GPS to redirect them if they got lost. I tried to highlight the role that WJ's thoughts had played in curbing his anxiety, and framed WJ's strategy of coping with this situation as an example of effective cognitive restructuring. WJ said his "primary concern in life" was his anxiety, and the frustration that he felt at not being able to overcome it. As an example, he described a worry that if he drove further than 5 miles away from his house, his "nerves" might get the best of him, leading to tremors that would cause him to lose control of the car. I told WJ that we would be focusing on strategies to cope with these fears over the next few modules.

WJ said he had been very busy in the last few days, and had not been able to read through Module 3 or fill out the Thought Log. We decided to use his negative prediction about losing

control of the car as fodder for practicing the creation of a Thought Log entry. WJ did an excellent job describing the situation, his feelings and the negative thoughts that he was having at the time. However, as in the first session, he repeatedly shifted the focus of our conversation to the role of “the unconscious,” in his struggles, and I worked hard to respectfully redirect our focus to program materials. I directed his attention to the list of Cognitive Distortions covered in Module 3, and we reviewed several that seemed most relevant to negative thoughts he had already mentioned (e.g. Catastrophizing). WJ recognized several of the listed thinking patterns from his own experience, although he said that he often had a hard time figuring out if his thinking was distorted or not in the moment, an issue which I told him would be addressed in upcoming modules.

WJ had filled in his Daily and Weekly Activity Goals worksheet, and had planned a trip to the Senior Center, which he and his wife had attended in the past for exercise classes and other activities, but had stopped attending when WJ's balance and leg strength had begun to deteriorate. WJ stated that, based on his PT therapist's feedback, he thought he was in better physical shape than when he had last attended the Senior Center, and wanted to see whether he would be able to participate in their exercise program. At the end of the session, YJ said she had something to share with me that related to family relationships, so we arranged to chat separately the following day.

Caregiver session 1.

In my conversation with YJ, she expressed great frustration with WJ's functioning in several areas, particularly in parenting their adult son. YJ complained that WJ did not support her when she cautioned their son about his profligate spending, and that he

seemed to “freeze up” at the first sign of conflict, leaving her feeling undermined. We discussed the circumstances of these interactions, and it seemed that these exchanges between YJ and their son often became very heated, with raised voices and occasional breaking of household objects, but no physical violence. WJ had expressed concern that the interactions could get physical, and that in his current state he felt powerless to intervene if this occurred, leading him “freeze up” in these circumstances, which YJ interpreted as weakness. It seemed important to get WJ’s side of the story as well, so I suggested that we discuss the issue further at our next scheduled session, and asked if YJ had any other concerns or information she wanted to share. She said she was frustrated that WJ’s anxiety amplified her own when she was driving, that he left the door open, and left chores unfinished, but stated that she was most concerned about his role in parenting their son.

Module 4.

WJ reported his mood over the previous week as a 6/10 (10 = best), and reported being less fatigued and more active than he had in a long time. Partly due to my sense that WJ had some misgivings about the TH-CBT philosophy, we took a moment to review his impressions of the program so far. WJ said the most significant thing he had learned was to question his interpretation of situations, and said this idea had been helping him work through anxious or catastrophizing thoughts when they arose. As an example, WJ had recently had a moment of panic when he had walked out of a barbershop and not been able to find his wife, who he thought would be waiting for him, and had the thought: “something terrible is going to happen to me.” He had then found a nearby bench to sit on and “talked himself down” until YJ returned a few minutes later. We used this situation to practice the ‘evidence for/against’ cognitive

restructuring technique. WJ shifted into storytelling mode as we began to look for evidence for and against this thought, and provided a host of extraneous detail regarding this particular occurrence, often concerning mystical or otherworldly aspects of his subjective experience. However, when he did focus on the task of evidence-gathering, he did an excellent job, particularly in discriminating between strong and weak evidence, or identifying pieces of evidence that were actually other negative thoughts.

WJ continued to have difficulty with the 'Acting In Accordance With Goals And Not Feelings' idea, stating that for him, "emotions are the more powerful motivator." I offered examples of situations in which he had ignored his feelings and pursued activities consistent with his goals and seen a shift in his mood, but WJ pursued the idea that Module 4 seemed to be portraying emotions and thoughts in an "adversarial relationship." I clarified that the concept did not pertain to all feelings and all situations, only those in which negative feelings were potentially limiting activity engagement that could foster more positive feelings, and WJ and I discussed the value and pleasure inherent in emotional life, which WJ seemed to appreciate. WJ clearly enjoyed taking a humanistic, philosophical perspective, and I wondered whether engaging him on this level, at least to some extent, would be important in maintaining our rapport.

WJ reported exercising intensely on two days (walking on the boardwalk for two hours and attending physical therapy) during the last week, and not the other days of the week, as he had reported when we last discussed exercise. I reiterated my concern about WJ "overdoing it," and WJ stated that although he recognized this risk, he felt it was worth taking because he had enjoyed the boardwalk so much. This led to a discussion of the aspects of this experience that WJ most enjoyed, my intention being to use this information to identify other activities that WJ

might enjoy for similar reasons that could be added to his activity schedule. WJ stated that he liked “being around people” and taking in “natural beauty,” so we came up with a few other activities that seemed relevant to these interests (e.g. an arts festival at a nearby public park that was coming up in the next week). WJ decided that walking 20 minutes each day in the next week was a good goal, but felt unsure of the best time to walk. He mentioned the afternoon as an option since he could nap afterwards, and I decided that it might be a good time to talk about sleep hygiene and the benefits to nighttime sleep of avoiding napping in the afternoon, since WJ had mentioned that his restless leg symptoms were already a barrier to sleep at night. WJ seemed interested in experimenting with eliminating naps to test whether this improved his sleep, and we ultimately agreed that part of his homework would be to avoid napping over the following week.

Wanting to follow up on my conversation with YJ the previous week, I asked her to explain what she had told me to WJ. She described her experience of feeling undermined by WJ when he did not support her in reprimanding their son. WJ explained that the arguments between YJ and their son sometimes became so heated that he worried that there might be a physical altercation, which he felt he would not be able to effectively prevent in his current physical condition. YJ stated that although she and her son did sometimes raise their voices during disagreements, they had never had a physical altercation, and that WJ need not worry about this. WJ agreed and said that he would try to make an effort to remind himself of this the next time YJ and their son had a disagreement. He also agreed with YJ that their son was careless with his money, but said he felt he had no right to express his concern about this issue because he felt responsible for promoting this carelessness. YJ said she felt WJ was taking too much responsibility, and that regardless of this origin of the problem, it was important to present

a united front in addressing the issue with their son. WJ agreed to try to be more vocal in echoing YJ's concerns if YJ would try not to raise her voice as much during these disagreements, which WJ felt was unhelpful and distressing to everyone involved. YJ seemed somewhat irritated by this, but agreed to do her best. I complimented them both for working towards a compromise, and praised WJ for being open to evidence suggesting that his fear of a physical altercation between YJ and their son might be unjustified.

WJ and YJ had not gone to the senior center in the past week as they had planned, but as we discussed the idea further, YJ seemed quite enthusiastic about the idea, since it offered bible study class, food, music, and social opportunities. WJ said he was hesitant to go to the senior citizen's center because his wife tended to play arcade games when they went in the past, which he did not enjoy, and thus he imagined that he would be on his own. When I asked him what worried him most about being on his own, he said that he often felt "separation anxiety" when he was apart from his wife, and that he thought this was left over from a time when his anxiety was worse and he was functioning more poorly, but that it was a hard feeling to shake off. It was clear to me that there were some important intermediate beliefs underlying WJ's anxiety, but we did not have enough time to address the topic fully, so we agreed to follow up on the topic in our next session.

For homework, WJ and YJ agreed to go to the senior center and read Module 5.

Module 5.

At the outset of our fifth session, WJ rated his mood over the past week as a 6/10 (10 = best). He explained that he had pushed himself to test his abilities in several scenarios, felt proud of himself for making the effort, and had been pleasantly surprised by the results. For example,

YJ had been ill and unable to drive, so WJ had taken it upon himself to bring their car in to the mechanic to get a broken taillight fixed. He had not driven on his own this far from home in several years, and prior to leaving had felt anxious and had the thought “I’m not going to make it back.” However, he told himself that he would take the drive block by block and monitor his sense of control along the way, and ended up making it all the way to the auto shop without having the tremors and flood of anxiety he worried would compromise his driving abilities. I praised WJ’s initiative, and framed this trip as an excellent example of a ‘behavioral experiment’ designed to test the validity of a negative prediction, and explained that this approach would be explained in greater depth in Module 6. In addition, WJ and YJ had gone to the Senior Center the previous week, and WJ said that it had been “nice” to be in a social environment, that the exercise class they participated in had gone smoothly, and that although he felt a bit isolated when YJ went to play the slot machines, he had found other activities to occupy him, e.g. listening in on the bible study group.

YJ, I suspect feeling more license to express her perspective after our individual conversation, presented a litany of complaints about WJ’s behavior during the previous week, but also mentioned that a year and a half ago, WJ’s neurologist had stated that he was “in no shape” to drive. YJ had delivered her complaints quite vehemently and left little room for WJ or I to interject for several minutes, and when she finished, WJ was quiet. I asked if WJ had a response, but he deferred to me. I validated YJ’s frustration with WJ, but also said that at least in the area of driving, it seemed to me that recent events suggested that WJ might be more capable of driving than he was a year and a half ago, and cited his recent successful trip to the auto shop. I suggested that perhaps we could work towards lessening her burden by helping WJ continue to gain confidence in his driving. YJ responded by describing an instance in which WJ had driven

up on the curb several months ago, and asserted that she did not think WJ was safe driving. YJ seemed entrenched in her position, 10 minutes remained in session, and we had not covered Module 5 material, so in the interest of concluding this discussion without offending YJ, I asked if she would agree to listen quietly while WJ responded, which she agreed to. After significant prompting, WJ shared that he did feel very guilty about the burden he placed on YJ, and was deeply fearful that he might have to cope without her. He also said that he felt his driving ability had improved significantly compared to when a year and a half ago, and said that when he had driven up on the curb, he had been trying to avoid a small animal in the road. YJ interrupted him angrily, but I reminded her of her agreement to hear WJ out, and she grudgingly complied, allowing WJ to finish his description of this incident.

We ran out of time before we could address Module 5 material, so I asked WJ to read Module 6 for homework, and explained that we would cover Module 5 and Module 6 concepts in our next session. I told WJ and YJ that it was important to address the issues we had discussed in session, but that I also wanted to make sure that WJ got a chance to discuss the concepts from Modules 5 and 6, and to that end, asked if YJ would be willing to let WJ and I speak alone at our next session, and suggested that she and I speak separately, as we had the previous week. She agreed to WJ and I speaking one-on-one at the next session, but declined my offer of a separate session, stating that she had nothing more to share.

Module 6.

At the outset of our sixth session, WJ described his mood over the last week as a 7/10 (10 = best), although he and YJ had both been ill with colds, which had dampened his mood. WJ had continued to work towards meeting his behavioral goals despite his illness, and was pleased that

he had been able to take on more household responsibilities while YJ was recovering from hers. In addition, he mentioned several instances in which he had been able to “talk back” to negative thoughts. In particular, he cited an instance in which he had recognized catastrophic thoughts in the context of a computer error message, had quelled his panicky feelings with positive self-talk, and successfully worked through the troubleshooting process.

Dr. Dobkin had provided me with WJ's midpoint assessment results, which suggested that negative thoughts continued to maintain WJ's depressive symptoms, so I suggested to WJ that we incorporate some of the negative thoughts the assessment had highlighted in our practice of the cognitive restructuring techniques covered in Module 5 and 6. WJ agreed, and we sought to apply cognitive restructuring techniques to WJ's negative prediction that his anxiety and depression, in combination with his physical PD symptoms would leave him functionally helpless, a negative thought identified in his most recent assessment. WJ was intent on discussing the origin of his negative thoughts in terms of unconscious mental processes, and I did my best to validate this interest and then refocus our conversation on the tools Modules 5 and 6 offered to help WJ deal with these thoughts. Eventually, WJ seemed to pick up on my redirection toward the concrete and the present, and did an excellent job applying the ‘evidence for/against’ technique to his negative prediction. Next, we turned to the ‘cost/benefit analysis’ technique using the same thought as an example, and WJ was able to readily recognize the thought's negative impact on his mood and behavior. We briefly reviewed the ‘behavioral experiment’ concept, and I framed WJ's trips to the beach, the auto shop, and the senior center as examples of this technique.

Although WJ clearly shown a solid grasp of each of these restructuring techniques, he mentioned after reviewing them that he felt cognitive restructuring was a “noble attempt to use

reason” in situations where emotions were overwhelmingly powerful, and that he saw this was a “very difficult undertaking,” perhaps even “impossible.” We had come to this impasse before, and I tried to validate that using cognitive restructuring was challenging, and took practice, but that research and clinical experience suggested that it was possible to use these techniques to change emotions, and I pointed out several prior instances in which I felt he had done so successfully. WJ shifted his focus to the instance from the past week in which he had experienced catastrophic thoughts in the context of a computer error message, and said at the time he received the message, he believed there was an entity in the computer that was “mocking him.” Deciding to go with WJ’s framing of the situation, I suggested that we call this entity the “depression genie,” and described cognitive restructuring as an effort to prevent the “depression genie” from taking control of his mood and his behavior, which WJ seemed to enjoy. At the end of this discussion, WJ still voiced some doubts about the effectiveness of cognitive restructuring, but said that the concept of the “depression genie” had been helped him make sense of cognitive restructuring. We agreed to discuss his concerns further in subsequent sessions.

For homework, I asked WJ to read Module 7 and to pick a negative thought to use as an example with which to complete the Extended Questioning Automatic Thoughts (QAT) worksheet. WJ expressed ambivalence about using the ‘evidence for/against’ technique that indicated to me that he had not fully grasped the difference between thoughts that expressed evaluable statements about the world, self or others, and thoughts that expressed feelings. I explained this difference and its implications for the ‘evidence for/against’ technique, praised WJ’s progress in understanding of this technique, and encouraged him to continue his practice. As fodder for his homework assignment, I suggested that WJ use the thought “something terrible is going to happen to me,” which had arisen when he had walked out of the barbershop and been

unable to locate YJ, and which we had discussed in Module 5. WJ agreed, but in listening back to the session recording, he sounded disengaged as we discussed the details of the assignment, and I think he may have felt that I was dismissing his ambivalence about the 'evidence for/against' technique. In hindsight, it might have been a better idea for me to accept his original suggested practice thought ("I am afraid that I will lose my reason") and ask him to practice all cognitive restructuring techniques except 'evidence for/against' on this thought for homework.

Module 7.

In session 7, WJ reported his mood rating for the previous week as a 5-6/10 (10 = best). He mentioned that the thought "I would be helpless without my wife and son" had negatively influenced his mood. I asked WJ if he could describe the situations in which this thought had occurred, and apply restructuring techniques from the Extended QAT worksheet to this thought. Instead, WJ presented a scenario in which he had experienced a "wave of heat" while he was watching TV. He said that there were no preceding thoughts that explained this sensation, and wondered how analyzing thoughts could be helpful in this instance. I reminded WJ that CBT theory proposes that thoughts, feelings, behaviors and biology are seen as being in ongoing dynamic interplay, not occurring in any particular order, and that thoughts and behaviors were targeted in the treatment program because they were easier to directly engage with than feelings or biology, and could influence the other two components. WJ stated that in fact, prior to his experiencing the "wave of heat," he had been discussing his son's impending relocation, and that this discussion had led to a flood of worries about his ability to visit his son and grand-daughter in their new location, given his concerns about driving long distances. I framed this thought as a manifestation of the negative thought WJ had mentioned at the outset of session: "I would be

helpless without my wife and son,” and suggested that WJ assess the evidence for and against the prediction that he would not be able to visit his son’s family in their new location. WJ concluded that he could not be sure, since he did not know where his son would be, or how comfortable he would be driving long distances by the time his son did relocate. I suggested that in such a case, when evidence about the truth of a negative thought is lacking, that he might resort to one of the other cognitive restructuring techniques.

Before we were able to settle on another restructuring technique WJ could apply, WJ returned his attention to the inexplicability of the “wave of heat” he had experienced, and compared it to the “fires of Hell.” This comparison seemed significant, and WJ went on to say that because he wanted to believe in a fair and just world, he could not help but conclude that his PD diagnosis must be a punishment for his sins. However, WJ observed that there were people he considered “good” (e.g. the Pope) who had been stricken with grave illnesses, which he took as evidence that the world was not fair, and that perhaps he was not being punished. He was uncomfortable with the idea of the world being unjust, but also recognized that the cost of believing the opposite was that he saw his suffering as deserved and inevitable, which led him to resist taking action to relieve it.

WJ then began to discuss his views on intelligent design and the existence of God, and asked me to share my thoughts on these topics. I allowed him to express his perspective, and then asked that we return to the task of examining the evidence for and against his “helpless” belief. Much of WJ’s ‘for’ evidence consisted of emotional reasoning (e.g. “I feel panicky, therefore I must be in need of help”), we discussed why this type of thought did not qualify as strong evidence of his helplessness, and WJ was ultimately able to provide others that to me

represented an encouraging willingness to “count the little things” (e.g. “I can take out the garbage,” “I took the car to the shop when YJ was unable to”).

WJ then stated that his “real concern” was that he would “lose his reason.” When I asked him to estimate the likelihood that this would occur in the near future, he said he had no way of knowing. I took this opportunity to promote ‘cost/benefit analysis’ as a useful alternative to ‘evidence for/against’ when evidence of the validity of a thought was difficult to gather.

At the end of this discussion, I was unsure of its impact on WJ, and was concerned that we had little time left to discuss Module 7 topics. However, WJ said he felt it had been a worthwhile discussion, and that he was less convinced that his PD represented a punishment based on our review of the evidence. He also mentioned that the phrase “talking back to negative thoughts” had resonated with him, and that he imagined this process as being like “wrestling a bull.” To me, this metaphor seemed in line with a ‘thought stopping’ or ‘cost/benefit analysis’ approach to cognitive restructuring, and I wondered whether this technique might be easier for WJ to accept and apply than ‘evidence for/against.’

Unbeknownst to me, WJ had been unable to download of the audio recordings of relaxation techniques associated with Module 7, so we spent the last 15 minutes of session establishing a means for him to access these recordings and agreeing on a practice schedule for the following week. At the end of the session, WJ mentioned that he had gone to the Senior Center with YJ three times in the last week, and while there, he had exercised, eaten lunch, and attended bible study sessions. WJ said he had been surprised at how quickly he had overcome his initial hesitance to go, and said he had even begun to find activities he could engage in while YJ was playing the slot machine. I expressed how impressed I was at his sustained effort, and congratulated him on conducting a successful behavioral experiment.

Module 8.

In session 8, WJ rated his mood over the previous week as a 7/10 (10 = best). He and YJ had attended the Senior Center three times, and WJ mentioned that he felt “strength coming back to his legs,” which he attributed to increased exercise. He had previously assumed that he would not be able to handle adding regular exercise to his PT sessions, and we reflected on the importance of testing predictions that stand in the way of healthier functioning.

WJ had read Module 8, and had engaged with the module material with a thoroughness and energy that I had not seen in previous sessions. WJ particularly appreciated the technique of writing down his worries, and said that doing so over the past week had made it easier for him to rebut them. As an example, he mentioned that on a recent trip to a restaurant with his family, he had worried that family members he had not seen for a long time would think he was speaking less clearly or having more difficulty with his balance than he had in the past, and that this would indicate that he was “deteriorating rapidly.” Prior to the trip, WJ used ‘best/worst/most realistic outcome’ technique to conclude that this outcome was unlikely given that he had been doing “everything he could to improve his condition,” his PT therapist had commented on his improvement in several areas, and he himself had noticed gains in strength and balance lately. WJ reported that the trip to the restaurant had been “a lot of fun,” and that the experience had yielded no evidence to suggest that other people had perceived his condition as deteriorating. In addition, WJ stated that he had been using the Progressive Muscle Relaxation (PMR) skills from Module 7 on a daily basis over the last week, and that this practice had helped him disconnect from his worries and “stay in the moment.” WJ’s report clearly represented a new level of initiative in implementing skills, which I took care to praise.

WJ and I revisited the thoughts “I’m helpless” and “I’m going to lose my reason,” which we had discussed in session 7. WJ stated that variations of these thoughts had been present over the last week, and that he saw them as expressions of an underlying fear of aging independent of the PD disease process. Based on my intuition in session 6 that WJ might be more amenable to a ‘cost/benefit analysis’ approach to cognitive restructuring, and my sense, based on WJ’s description of the aging process, that his fears were not clearly distorted, I encouraged him to take a ‘cost/benefit analysis’ approach to these thoughts. WJ quickly came to the conclusion that, given its negative impact on his mood, the certainty of age-related deterioration, and the difficulty in gathering evidence as to how this process would unfold for him, he needed to “talk back” these thoughts and redirect his attention to more positive thoughts and activities, and he seemed energized by the idea of asserting control over these thoughts, again referencing his metaphor or “wrestling a bull.” He then asked that we discuss the idea of his having multiple “selves.” I did my best to validate his perspective by relating this topic to the idea of certain thoughts being generated by the “depression genie,” and reemphasized his duty to “fight back” against this entity, which seemed to satisfy WJ.

WJ stated that he was entirely satisfied with his sleep, had been gradually cutting down on his naps, and was already abiding by the sleep hygiene principles described in Module 8, so we focused our attention on the worry control techniques we had not yet discussed. In line with his affinity for “talking back” to negative thoughts, WJ said he found the “Thought Stopping” concept useful, and described repelling worries while watching TV one night in the last week. WJ seemed to enjoy the idea of being a boxer who was “taking blows” from these thoughts, but “refusing to go down,” and I encouraged WJ’s use of this metaphor, as it seemed like a way to simplify and enliven the cognitive restructuring process for WJ. Overall, WJ demonstrated

significantly more engagement and interest in the program material than he had in prior sessions, and I was impressed with his retention of concepts from prior modules.

For homework, I asked WJ to read Module 9, in addition to continuing with his activity scheduling and utilizing the skills we had covered in the program to date.

Module 9.

At session 9, WJ rated his mood over the previous week as an 8/10 (10 = best). He reported that he had cleared a woodpile from the backyard the day before our session, which he said he “would not have been able to do two or three months ago without passing out.” I framed this achievement as a successful behavioral experiment, which WJ acknowledged with some pride. WJ had also attended the Senior Center three times in the past week, and mentioned that the “smiling faces and ‘good mornings’ made his day.”

He then described a “spooky” experience later in the day in which he had glanced at the cleared woodpile, and had a moment of doubt as to whether he had actually cleared it himself. I expected his point to be one of pleasant surprise at his physical abilities, but WJ focused on his doubt, stating that he had felt as if there were “two me’s” discussing whether one or the other of them had actually cleared the woodpile. He then asked whether I thought he might be becoming schizophrenic. I was unsure how seriously to take this question, as it seemed far-fetched, but also was in keeping with WJ’s affinity for the fanciful. He pursued the question seriously, so I briefly described the etiology and diagnostic criteria for schizophrenia, and explained why I felt the diagnosis was not appropriate for him, which WJ seemed to accept. However, WJ then asked if we could return to his experience of clearing the woodpile, and asked if he might have returned to an earlier stage in his life through “inadvertent self-hypnosis.” I explained that I was

unfamiliar with hypnosis, but that one could see his experience as the product of the hard work he had put in to build up his physical strength and cope with anxiety about the consequences of physical activity that he had harbored prior to the program. WJ sounded disappointed by this response, but accepted my request that we shift our focus to Module 9 topics.

In reviewing WJ's progress towards achieving the goals he established early in the program, WJ and I agreed that he had met his exercise goals, and had partially fulfilled his social goals, although he had not found an activity that allowed him to interact with peers as he had when he was part of the bowling league. In discussing how WJ could meet this goal, WJ focused on bowling, and began to speculate about whether he could make a comeback as a "respectable" bowler. I tried to expand the discussion to other possible settings in which WJ might be able to find camaraderie, and emphasized the objective of social connection. WJ mentioned that he had gone to the bowling alley just to "take in the atmosphere" several months ago, had run into several old bowling friends, and had enjoyed himself. He decided to set a goal to revisit the bowling alley on a night when his old bowling friends would be there, and work towards making this part of his weekly routine.

We briefly reviewed the worry control and relaxation techniques covered in the last two modules, and WJ stated that he continued to benefit from PMR and Thought Stopping, and described his use of these techniques in a manner that showed he had 'made them his own' through the use of metaphor. For example, he described imagining a calming substance filtering through his body as he did his PMR exercises.

Next, we reviewed the most important negative thoughts we had discussed during the program, and WJ asked that we focus on a prediction that he would lose all of the progress he had gained after we finished the program, which he saw as a variation of his "I'm helpless"

thought. In discussing the evidence for and against this thought, I explained to WJ that I thought he had internalized many of the concepts from the program, and that I believed he would be able to put these concepts to use without my help in the future. I also reminded him that booster sessions would be available if he felt he needed further reinforcement of the techniques. We spent the remainder of the session focusing on finding a reframe for WJ's negative thought "I'm helpless." WJ did a good job reviewing the evidence we had gathered related to this thought, but had a hard time choosing a reframe thought that directly addressed the negative thought.

Deciding that coming up with a reframe thought was too much to expect of WJ given that our 'evidence for/against' restructuring efforts for this thought had stalled in the evidence-collecting stage in previous sessions, I took a more directive role in formulating the reframe thought, which ultimately was formulated as "Although there are some things I cannot do, I am doing the best I can, and I am not helpless."

For WJ's homework assignment, I him to read Module 10 and come up with reframe thoughts for several important negative thoughts we had not discussed (e.g. "PD is a punishment").

Module 10.

In session 10, WJ characterized his mood over the past week as a 7/10 (10 = best). WJ reported that he had driven on the highway to his son's house and gone bowling with him over the weekend, both of which he had not done in many months. WJ described having the negative thought "You shouldn't do this" as he walked out the door before leaving to meet his son, but refuted this thought using an array of excellent evidence (e.g. "I have never gotten in an accident," "I can drive in the right lane and pull over if I feel unsafe"). In addition, WJ reported

that his legs felt tired while he and his son were bowling, and he worried that he might fall if he continued to bowl. However, he had experimented with an adjustment to his stance that he thought might help him maintain his balance, and that this adjustment had allowed him to bowl effectively and without fear of falling. I felt mildly concerned that bowling might have been risky, as WJ had said he did not feel comfortable bowling in our previous session, but WJ assured me that he had been appropriately cautious in assessing his capacity to bowl, and had asked his son to spot him for the first few rounds, which I praised. WJ had also attended the Senior Center three times and gone to the horseracing track with YJ, both of which he reported as being very enjoyable. WJ also reported 'talking back' to catastrophic thoughts that had arisen when the lights inexplicably went out while he was home alone one evening. As in past sessions, WJ wanted to explore the possibility that the "voices" of the negative thought and the reframe thought represented two separate selves or personalities, and that this might indicate evidence of schizophrenia. I tried to frame them as two sides of himself, focusing on the fact that WJ experienced each of these voices as his own.

WJ had read Module 10, but had not worked on identifying reframes for the negative thoughts we had identified in session 9. We began work on identifying reframe thoughts, but struggled to maintain focus on this topic, as WJ seemed more interested in describing instances of these thoughts rather than developing reframe thoughts, despite repeated reorienting efforts on my part. I decided it would be more useful to focus on Module 10's review of the most important concepts of the program, and discuss how WJ could utilize program concepts and techniques to navigate future challenges. During our program review, WJ demonstrated solid understanding of balanced evaluation of the likelihood of positive and negative outcomes, which I highlighted and praised. WJ decided that behavioral experiments, talking back to negative

thoughts, and activity engagement were the most important ideas he had taken from the program, and we discussed how he might apply these concepts to specific future scenarios. In particular, we focused on how he would deal with the loss of certain physical and cognitive capacities, and decided that the 'cost/benefit analysis' technique was well suited to coping with negative thoughts related to this scenario. In addition, WJ asked "How do we differentiate between worrying about the future and judiciously preparing for the future?" and we discussed the difference between problem-solving and rumination, and the benefit of maximizing the former and minimizing the latter. At the end of the session, WJ summed up his experience of the program by saying, "negative thoughts still creep in, but I feel better-equipped to cope with them."

Finally, we set specific exercise goals and social goals that WJ felt would be useful to adhere to on an ongoing basis (e.g. continuing to exercise at the Senior Center three times each week). WJ and I arranged to have a booster session in two weeks.

Booster session 1.

At the outset of our booster session, WJ mentioned that he continued to experience thoughts suggesting that PD was a punishment for his sins. When I asked him whether he had examined the basis for these beliefs, WJ said he still felt guilty about being absent for his mother's death, despite the fact that he felt had done everything in his power to be there. WJ stated that he felt this guilt might be related to his Catholic upbringing, and that although he identified as an atheist, he felt he could not completely disconnect from Catholic teachings around sin and guilt. I had assumed that WJ had brought up these thoughts because they had been causing him distress, but when I asked about their impact, he said that he had been able to

rebut these thought using the concepts of the program, and that they had not significantly impacted on his mood.

WJ said he had been re-reading Module 1, and expressed interest in the idea that the interpretation of a situation, rather than the situation per se, was the key to its emotional impact. We used this idea to look at WJ's recent frustration with his mental acuity, and tried to generate multiple perspectives on this issue, ranging from those that were associated with negative feelings (e.g. "I'm a shell of myself") to positive feelings (e.g. "I'm doing the best that I can, and I have enough mental faculties to live a meaningful life"). WJ did an excellent job generating a number of different perspectives on this topic, and was able to use 'cost/benefit analysis' to identify the perspectives most conducive to a positive outlook.

I asked WJ whether there had been moments over the last two weeks when he had struggled with his mood, and he had difficulty identifying specific instances. He said he had been having some "what if" thoughts, but when I inquired further, he said these thoughts had been imaginative musings that arose in the context of watching a science fiction television program, and were not associated with fears about the future. Suspecting that fears about the future were likely still on WJ's mind to some extent, I assessed for their presence since our last session, but WJ did not endorse these or any other negative thoughts.

Case discussion.

Working with tangentiality.

Learning to manage WJ's persistent tangentiality in a way that was minimally invalidating, but also allowed us to cover the program's concepts, constituted the most important challenge in my treatment with WJ. WJ had a romantic, fantastical, philosophical flair to his

thinking, and tended to guide our conversation towards topics that satisfied these interests.

These topics included 'the unconscious mind,' whether or not it was possible for him have two different selves existing simultaneously within him (and whether this meant he was schizophrenic), atheism, the enigmatic nature of subjective experience, supernatural phenomena, and a host of others. A discussion of my effort to overcome this challenge may have general utility to other clinicians delivering treatments that are telephone-based, highly structured, and/or involve patients with proclivities for tangentiality. I will describe the nature of WJ's tangentiality in further detail, relate my attempts to deal with this aspect of our treatment, and discuss the lessons I drew from these efforts that I see as having the most general applicability to similar treatments.

WJ's tangentiality was challenging for a number of reasons. First, in addition to veering off topic frequently, WJ pursued his tangents persistently, and would often talk over my attempts at redirection in order to continue his thought. Second, it was frequently unclear to me in the midst of these tangents whether WJ and I would ultimately make a connection to a topic of relevance to the program or not. In some cases, giving WJ space to pursue what seemed like a tangential topic ultimately yielded very important clinical information, and many more cases it did not. This can be seen as a variable ratio intermittent reinforcement schedule from my perspective, and made it difficult to know when to take an active role in redirecting the conversation, and when to let WJ guide the discussion. Third, the telephone-based format left me without the aid of non-verbal cues from WJ to help me gauge when and how to redirect him, and the aid of my own non-verbal means of communication in order to assist in this redirection. Fourth, over the course of our sessions, I noticed that when I did redirect the conversation away from a given tangential topic, WJ often returned to that topic unless my redirection used his topic

as a starting point or acknowledged it in some way, which forced me to develop creative ways of tying tangential topics back to subjects that I felt were more relevant to the program.

To provide a flavor for the way that WJ's tangentiality played out in our sessions, I offer this example from our first session: we had been reviewing the basic principles of Activity Scheduling and were working towards setting an exercise goal for the following week (walking 10 minutes each day), when WJ mentioned that he used to run 5 miles per day in his Coast Guard days, and then began to describe other recreational activities that he had historically enjoyed. Though this was a departure from the task of setting an exercise goal for the following week, I saw it as consistent with our broader goal of reviewing activities that had been meaningful or enjoyable for WJ in the past, which is often helpful in generating possible activities for WJ to add to his schedule. WJ described his abiding love of bowling, stating "The highlight of my life was bowling in a league for 7 years," and "I cannot describe my personal devastation when it became clear that I would not be able to bowl." At this point I tried to interject with the intention of assessing what aspects of the bowling league WJ most enjoyed, why he stopped bowling, and whether it might be possible to return to the bowling league, in a modified way if necessary, or to find an activity that offered similar benefits (e.g. camaraderie, social time with peers). However, in the midst of my asking these questions, WJ interrupted with a change in course: "I am going to tell you something that is going to blow your mind, my son is a state policeman...when he was little, I used to go to Fort Dix to practice shooting with him, and now the reverse is happening..." and WJ went on to describe his amusement at the fact that his son was now taking *him* to the shooting range. At this point, we had jumped to another topic that also seemed fruitful from an Activity Scheduling perspective, but I had not had an opportunity to frame the discussion in terms of Activity Scheduling, and I was concerned that WJ was focused on telling

these stories for the their own sake rather than on analyzing them with the goal of getting increasing his current activity engagement. Worrying that we might continue to move from topic to topic without applying this information to the task of Activity Scheduling, I tried to interject again, and this time, I persisted when WJ talked over me. I apologized for interrupting, provided a brief review of the rationale for Activity Scheduling, and asked if we could return to the original task of setting an exercise goal for the week. However, in listening back to the session, WJ began to sound somewhat subdued and distant in his responses at this point, and it is possible that he experienced my redirection as abrupt and dismissive.

This vignette illustrates several of the challenges I described above. In particular, it exemplifies the situation in which a tangent shows potential to be clinically useful, and I feel uncertain about whether or not to redirect the conversation. In this case, it was not the content of WJ's tangent, but the lack of treatment-specific framing that led me to decide to try to redirect the conversation. This vignette also demonstrates the way in which WJ's tendency to talk over me led me to feel torn between interrupting WJ firmly, which ran the risk of causing a rift in rapport (as I suspect occurred in the example described above), and simply waiting until WJ concluded his thought, which I worried might result in a significant loss of session time. I experimented with the latter approach early in our treatment, and found that WJ would often continue his monologues for long periods with little apparent interest in input from me.

The pattern described in the example above was repeated many times in our first few sessions, and I recognized that I needed to figure out a strategy to redirect our conversation in a way that did not lessen WJ's engagement. However, I had little success in this effort over the course of the first 5 sessions. In session 6, WJ returned to a favorite tangential topic of his, the idea that his negative predictions about the future had an unconscious origin. I did my best to

validate this interest and then refocus our conversation on the cognitive restructuring tools Modules 5 and 6 offered to help WJ deal with these negative thoughts. WJ expressed doubt that “reason” could influence his emotions, which he saw as powerful and mysterious forces. I suggested that I thought he had already used reason successfully to influence his feelings in a positive way, and cited the example he had mentioned earlier in the session in which he had received a computer error message, automatically assumed the worst (“I screwed up my Windows 10 installation”), but then recognized that this was an untested assumption, and successfully diagnosed and resolved the error message. WJ’s response did not indicate that he had registered my point about his effective use of cognitive restructuring skills, and instead, he focused on his belief that there was a “malevolent force” within or channeled through the computer that was trying to “mock” him. I suggested that we conceive of this “malevolent force” as the “depression genie,” and that his job was to defend against the “depression genie” by ‘talking back’ to it. WJ was amused by the idea of a “depression genie,” and interestingly, over the course of the next few sessions, WJ repeatedly framed his struggle to overcome his depression as a noble battle against an evil entity, and WJ’s use of this metaphor seemed to help cognitive restructuring skills come alive for him.

Although I was not fully aware of this at the time, I believe the above example is an instance in which WJ’s tangentiality had great clinical significance. I think his preoccupation with the unconscious, supernatural phenomena, and the mysterious power of emotions, were indirect expressions of ambivalence about the usefulness of cognitive restructuring skills, and possibly ways of communicating his concern that he could not be helped. At times, WJ was quite direct about his belief that “reason” was incapable of exerting control over emotions. When he began relating his thoughts about the “malevolent force” in the computer, instead of redirecting

him to module materials in the concrete way I had used without success in the past, I tried to frame the situation in a way that was consistent with the principles of the program but also 'played by WJ's rules' in the sense that I accepted his premise of a mysterious, malevolent entity. This was not a conscious decision on my part, but after the session, it occurred to me that this might be a useful way to leverage WJ's tangentiality in a productive way. Not only did this approach seem to limit the likelihood of WJ feeling dismissed, but it helped me to communicate program concepts that I had previously struggled to get across.

In later sessions, I used this experience as a template: when WJ seemed to veer off topic, I tried to find some piece of what he was saying, preferably some element that seemed particularly likely to appeal to his fanciful side, and either a) describe a program concept using the language and logic expressed in the tangent, as in the above example, or if I could not figure out how to do this in the moment (which was often), to b) engage with the premises of the tangent briefly, and then attempt to gradually guide our conversation back to a more literal discussion of a program concept.

One instance in which strategy b) worked well was in session 7, when WJ was perseverating on the idea that emotions or physical sensations precede thought, but then made an association between an inexplicable "wave of heat" that he experienced during an episode of anxiety, and "the fires of Hell." This comment could easily have been dismissed as extraneous detail, especially given WJ's fondness for waxing poetic, but I asked him to expand on this comparison, and in doing so, WJ revealed that he felt that his PD diagnosis was a punishment for sins he had committed, which turned out to be a very powerful negative thought that we were able to effectively address later in the conversation using standard 'evidence for/against' strategy.

Both strategies place a premium on quick thinking, and I was not always successful in employing them, but when they worked, they seemed to yield the best results in terms of efficiently conveying program concepts and maintaining rapport.

In taking stock of the most generalizable lessons gleaned from my attempts to deal with WJ's tangentiality, one important lesson was that tangentiality can be successfully handled by using the content of the tangent as the basis for a reframing of a relevant concept, or by engaging with the content of the tangent to validate the patient's perspective before gradually guiding the conversation back to the desired treatment topic, as described above. The specifics of my approach to dealing with WJ's tangentiality (e.g. the use of metaphors that appealed to his interest in the romantic and supernatural) may not have broad applicability, but the general strategy of using some element of the tangent as the basis for redirection, as described above, may have general utility. Regardless of the particular strategy used to manage tangentiality, I propose that clinicians working with PD patients (Taylor and Saintcyr, 1995; Robertson and Flowers, 1990) or other populations with well-documented deficits in executive function, managing tangentiality is an important clinical skill to develop, particularly when implementing CBT treatments over the phone, since structured, time-limited treatments place more of a premium on efficient use of time, and the telephone-format limits the range of communicative tools at the clinician's disposal to manage tangentiality, as described above.

Looking back on our treatment in the context of what I have learned as a clinician since then, I think it might have been as or more effective for me to directly express my dilemma to WJ, and work to establish a mutually agreed upon procedure for handling situations in which we had different ideas about where our discussion should go. I considered taking this approach at times during WJ's treatment, but did not pursue it for a number of reasons. First, at that stage of

my clinical development, I had little practice in commenting on interpersonal patterns with patients in the moment, perhaps because this skill had not been emphasized in my CBT training to date, and I was concerned that I might not be able to deliver my message in a way that did not offend WJ. The fact that I would not be able to read WJ's body language or facial expression during this discussion also made me more reticent to take this approach. However, subsequent externship experiences gave me the opportunity to practice such conversations with patients, and I have learned that in many cases, the benefits of taking a direct approach to addressing problematic therapeutic dynamics outweigh the risks, and that my estimates of the likelihood of a patient taking offense at such an intervention were unrealistically high.

Lastly, working with WJ's tangentiality helped teach me the value of looking for tacit messages expressed in seemingly irrelevant tangents. For example, WJ's persistent reference to the unconscious, supernatural, and the inscrutability of subjective experience seemed unrelated to the goals and content of the program at first. However, I ultimately saw his concern with these topics as an indirect way of expressing his ambivalence about the cognitive interventions presented in the modules. Additionally, WJ often sounded animated and upbeat during his tangents, and more subdued when we were discussing his distress in a concrete way, and in listening back to our session recordings, I noticed that he often became tangential in the midst of discussions of distressing feelings. Based on this information, I suspect that WJ's tangentiality may also have served as a means, conscious or unconscious, of avoiding frank discussion of his distress. Thus, even when working with patients whose tangentiality might plausibly be explained by executive functioning deficits alone, I think it is useful to consider the possibility of tangentiality as an avoidance mechanism.

JY Case Study**Identifying information.**

JY presented for treatment as a 73-year old, married, domiciled, retired, Chinese-American man living in Western New York who had been diagnosed with PD 6 years prior to intake (2010). He reported that he had first noticed depressive symptoms in 2007, and that after a 6-month remission, the symptoms had returned in 2008 and been present ever since. JY had worked as an engineer for about 30 years, but had retired several years ago. JY stated that for much of his life, he had been an upbeat, active person with strong interests in tennis, singing, and digital technology. However, since his PD symptoms and deteriorating eyesight had begun to limit his physical and cognitive capacities over the last 10 years, he had become progressively less involved in activities outside the home.

JY's caregiver for the study, his wife KY, was a 73-year old, Asian-American, retired female living with JY. KY reported no prior psychiatric history, and stated that her medical history included breast cancer that had required a lumpectomy in 2001 and a mastectomy and chemotherapy in 2014, but was now well controlled with the help of medication.

GM and JM had known each other for 48 years, and reported no significant marital discord. GM and JM had one daughter who was married and lived in the Northeastern United States with her husband. JY and KY reported a close relationship with their daughter, but stated that it had been harder for them to see her since she moved away from Western New York.

Presenting problem, psychiatric history, and assessment.

JY stated that since 2008, he has been feeling "sad" about 25% of the time, has experienced disturbed sleep and a significant shift in his sleep schedule, poor concentration,

increased appetite, helplessness and hopelessness. JY reported minimal engagement with activities or other people aside from his wife, much of which he attributed to the physical symptoms of PD, although JY also stated that he felt his interest in activities that he was able to engage in had diminished. JY reported being highly focused on and distressed by his PD symptoms (e.g. abdominal pain, slow speech, memory difficulties), particularly when he spent time with friends and others who knew him “before PD.” At intake, JY was taking 75 mg of Zoloft daily, and reported that he felt this medication provide moderate relief from his depressive symptoms.

JY reported one past depressive episode in 2007 after he was diagnosed with an atrial fibrillation. JY stated that his mood was very low during this time, he had negligible interest in socializing or other activities, and considered suicide, although he did not make an attempt. This depressive episode lasted about 6 months, but was followed by a period of 6 months that JY described as “happy.” However, JY stated that sadness, fatigue and disinterest returned in 2008, and had been present to some degree ever since. JY participated in biweekly, supportive psychotherapy for 3 years starting in 2007, and reported that he found this treatment moderately helpful. JY denied any other psychiatric history.

At baseline, JY scored a 22 on the HAM-D, a 19 on the BDI, and a 23 on the HAM-A, indicating moderate depressive and anxiety symptoms. Correspondingly, JY received a CGI score of 5, indicating “Markedly Ill” psychiatric status. KY’s baseline score on the CDS was a 44, indicating a high degree of caregiver burden. JY scored a 22 on the MoCA, suggesting that he is experiencing mild cognitive impairment (MCI) (Nasreddine et al., 2005).

Diagnoses.

Axis I: Major Depression, Moderate, Recurrent (296.32)

Axis II: None

Axis III: Parkinson's Disease (ICD-9 Code 332)

Axis IV: GAF Score: 52

Case formulation.

Based on the intake information and the guiding conception of this treatment approach, I conceptualized JY's symptoms of depression as originating from significant functional impairment resulting from PD and other medical conditions (e.g. a cataract, putative celiac disease, lingering musculoskeletal injuries), which led to disengagement with rewarding activities (e.g. tennis, socializing, singing), negative predictions about what activity engagement would be like, and significant guilt about the impact of his functional impairment on others. JY endorsed negative automatic thoughts like "I am useless," "if I go to the exercise class, it will be unsafe," "if I go visit with friends, I will feel tired and unsocial, and I will feel embarrassed," which I believe were derived from conditional assumptions and automatic beliefs such as "if I cannot function at the level that I used to, I have no value" and "I cannot navigate the world anymore," and the core belief "I am worthless." I conceptualized JY's core belief that he is "worthless" as partly mediated by JY's collectivist cultural background, and specifically, the value placed on making material contributions to the great good collectivist cultures. JY's depression was also maintained through a self-reinforcing cycle of negative evaluation of his functional abilities and further withdrawal from rewarding activities.

In addition, I saw JY's caregiver, KY, as contributing to JY's poor sense of self-efficacy, low self-worth and guilt by overemphasizing his deficits relative to his strengths, frequently communicating her frustration with his functional impairment, and positively reinforcing JY's inactivity by taking charge of many activities JY was capable of performing on his own (e.g. managing his PD medication).

Course of treatment.

Module 1.

At the outset of our first session, JY rated his mood over the previous week as a 5/10 (10=best), citing chronic pain, fatigue, and hopelessness about the future as primary contributors to his low mood. JY asked that we review the symptoms of depression listed in Module 1, and endorsed low mood, lack of concentration, constant worry, increased appetite, severe fatigue, poor sleep and worthlessness.

JY stated that he had been feeling sad about not being able to participate in his favorite activities any longer, and expressed doubt that this situation could change. I tried to validate JY's feelings of loss, but emphasized that in the course of the program, we would work together to identify activities that JY found meaningful and enjoyable, and were also feasible given his current physical and cognitive constraints. JY had attended a house party attended by old friends in the last week, during which he had felt "very bad" that he could not play tennis, sing or do many of the other activities that they used to share due to his PD symptoms and other physical ailments, and felt he had been withdrawn and unsociable as a result of these feelings. I emphasized the importance of modifying activities to accommodate changing physical and cognitive capacities, and mentioned that I had found patients were often pleasantly surprised at

their enjoyment of modified activities. I also proposed that we look for new activities that were feasible for JY, and posited that involvement in meaningful activities, regardless of the details, was likely to improve his mood. JY responded positively to the idea that activities influenced mood: he offered examples of engrossing activities that helped him “forget about” physical pain and low mood (e.g. mah-jongg), and described several instances in which he had “not felt like participating” in such activities beforehand, but found them highly rewarding once he was engaged.

I framed the above scenario as a perfect illustration of the concept of ‘Acting In Accordance With Goals And Not Feelings’, and proposed that depression often involves a disinterest in or negative expectations about activity engagement, and that one of the most important means of overcoming depression involved pushing through these feelings by engaging in the activity in spite of them, and allowing the rewarding nature of the activity to improve mood.

JY expressed concern about the idea of “forcing yourself to do things,” and describing a friend of his who had pushed himself to do strenuous exercises despite being physically frail, and ultimately suffered a serious fall. I emphasize that the point of the ‘Acting In Accordance...’ concept was not for the patient to ignore legitimate fear of a dangerous activity, but to help them overcome reluctance, lack of motivation that might be interfering with engagement in safe and meaningful activities.

KY became involved in the conversation halfway through session, and described the same party JY had referred to earlier in the session, asserting that JY’s engagement problems during the party had to do with his refusal to go to sleep at a reasonable time the night before. JY objected to this characterization, stating that he had little control of his sleep schedule. KY

maintained that once he was in bed, he had no trouble falling asleep, but that he often chose to spend time working on his computer late into the night, and ended up missing beneficial activities because he slept too late, or was unable to enjoy activities due to fatigue resulting from poor sleep.

For homework, I asked JY to read Module 2, and write down activities that were enjoyable or meaningful, either currently or in the past, as a starting point for the development of an Activity Schedule. JY agreed tentatively, and when I asked him how he felt about the homework assignment, he said he had noticed the Exercise Goals category in Module 1, and had significant fears about rejoining an exercise class he had participated enjoyed in the past. I tried to validate his concerns and refocus on the process of brainstorming possible activities, stating that evaluation of the feasibility of particular activities could be saved for the next session.

Module 2.

At the outset of our second session, JY reported his mood rating over the last week as a 6/10 (10=best), with a high of “8 or 9.” However, KY disputed JY’s report, saying that she felt he had been persistently irritable and “out of sorts.” JY seemed embarrassed by this, allowed that he had been irritable at times, and fell silent as KY speculated on a variety of reasons for this behavior, all of which she characterized as resulting from JY’s “irrationality” or poor decision-making. I was taken aback by the vehemence of KY’s criticism, and did not address it directly. Instead, I shifted our attention to a review of the previous week’s homework.

In reviewing the list of current and past pleasurable activities JY had come up with, it became clear that his physical limitations, PD-related and otherwise, posed significant barriers to activity engagement: he had a cataract that compromised his vision and made it difficult for him

to drive, he reported being in almost constant pain from what he believed to be PD-related constipation, he had a torn rotator cuff that had been surgically repaired, but still caused JY pain and limited his movement, he had been losing strength and balance according to his neurologist, and his tremors were significant enough to make working on his computer, one of JY's favorite pastimes, arduous and frustrating. JY's most meaningful current activities were playing mah-jongg with friends once weekly, evening get-togethers with KY and other couples roughly once every two weeks, and working on his computer. The latter activity took up a great deal of JY's time, and was characterized as mindless and unhealthy by KY. JY said he spent his time on the computer addressing problems (e.g. diagnosing bugs) or doing chores (e.g. monitoring finances), and said that these activities were important to him because they helped him feel "useful."

After JY and I had discussed his most significant current and past activities, we worked to finalize the treatment goals discussed in our first session. In addition to improving his mood, JY set goals to increase his participation in exercise and social activities, and shift his sleep schedule earlier so he could be more active during the day.

In discussing these goals further, it became clear that JY had been involved in an exercise class in his community until two years prior, but had stopped attending the class when it ended and never returned. KY felt that JY should return to this class, but JY presented a number of concerns with this plan. First, he worried that his poor balance and strength might prevent him from participating in the exercise class. JY also expressed fear that the class might not be safe, and mentioned that another group member had fallen at the class about a year earlier. JY further reported that when he stopped attending the group, class leaders and others had encouraged him to return, but he had not returned their calls, and felt embarrassed to face them again. KY refuted JY's concerns in an irritated tone, stating that the class was designed to accommodate

people with a range of physical limitations and that JY should not be worried that he would be unable to benefit from it, that the fall suffered by a class member had happened in the parking lot, not in the class. In addition, KY stated that JY “had no reason to be worried” about facing class members and leaders again because they were unlikely to remember his failure to return their calls. JY had little response to KY’s points, and asked me for my opinion. Seeing KY’s points as potentially useful counterevidence for JY’s negative prediction, I introduced the Thought Log as a means of documenting negative thoughts, along with associated situations and emotion, with the ultimate goal of assessing the validity and usefulness of these thoughts. JY and KY responded with bewilderment, and I realized that in an effort to provide the rationale for completing the Thought Log, I had presented too much information too quickly. I apologized, and backtracked by asking JY to document thoughts during the coming week that were associated with negative feelings or behaviors with KY’s assistance.

In the interest of helping JY and KY become accustomed to the process of translating treatment goals into Daily and Weekly Goals, I asked JY to pick one step that they could take in the direction of assessing whether participation in the exercise class would be feasible. JY committed to calling the community center where the class was held to confirm the class schedule.

In reflecting on this session, the critical tone with which KY delivered her refutation of JY’s concerns about the exercise class stood out to me, particularly in light of her similarly critical evaluation of JY’s difficulty engaging in the party at our previous session. I thought that the content of KY’s contributions, if accurate, had the potential to be very useful in addressing JY’s negative thoughts, but thus far, JY had responded to her by shutting down, and I was alerted

to the possibility that relational difficulties between JY and KY might become a barrier to treatment progress.

Module 3.

At the beginning of our third session, JY reported that his mood over the last week had been a 5/10 (10=best). JY had confirmed the schedule of the exercise class, but forgotten to utilize the Thought Log or read Module 3. JY had played his weekly mah-jongg game with friends, and had spent an evening socializing with KY and several other couples. JY had enjoyed his mah-jongg game, but was disappointed that he had lost energy over the course of the 6-hour game, and worried that other players became frustrated with his slow playing pace. In addition, JY had been very hesitant to participate in the evening out with friends due to fatigue, tremors, and acute abdominal pain. In the early part of the evening, JY felt embarrassed about his motor symptoms and had difficulty engaging in conversation, but had gradually grown more comfortable, and ultimately reported having a good time. I praised JY for his willingness to attend the event despite his feelings, and highlighted the discrepancy between his anticipated and actual enjoyment of the evening. I emphasized that paying attention to instances in which he underestimated the value or enjoyment of various activities would be useful in generating evidence to support "Acting In Accordance..." in the future, and might also help us identify activities to add to his Activity Schedule.

Since JY had not completed his Thought Log homework or read Module 3, I decided to use negative thoughts related to JY's mah-jongg game and evening out with friends to generate Thought Log entries and explore the concept of Cognitive Distortions in session. JY, with significant assistance from KY, was able to create several Thought Log entries, and recognized

the influence of his thoughts and behaviors on his mood by comparing these aspects of his experience at several different points over the course of the social event from the previous week. JY had difficulty grasping Cognitive Distortions as abstract categories, but was able to come up with examples of the 'Fortunetelling' distortion related to his perception of his inability to cope with social situations, exercise class, and coping with PD.

KY expressed concern that JY would not be able to attend the exercise class unless he made a concerted effort to go to bed and wake up earlier. JY said this was necessary, and felt he could wake up earlier if he needed to. KY angrily described several recent instances in which he had good reason to get up early, but had not done so. JY said that he had missed these activities because he was "slow to get ready," not because of his sleep schedule. KY responded that he should adjust his sleep schedule in order to account for how long it takes him to get ready. JY acknowledge that this was a fair point, and asked me what we should do about his sleep. Hoping to create space for JY's perspective, I asked him to describe his view of the pros and cons of shifting his sleep schedule. JY agreed that his sleep patterns caused him to miss out on activities, but that staying up to work on his computer gave him a sense of accomplishment, and helped him "forget about" his pain and PD symptoms.

KY stated that she felt JY had been procrastinating on his program homework, as he had put off reading Module 3 and prioritized other activities. JY agreed with this assessment, but also stated that pain, physical slowness, and difficulty with his vision contributed to his difficulty in completing homework assignments. KY said: "I can remind him, but I don't want to be a drill sergeant." JY stated that he had hoped to type up the homework on his computer, but had misplaced my e-mail detailing his homework assignment and could not find the Thought Log.

Next, we focused on scheduling JY's attendance at the exercise class discussed in previous sessions. JY continued to endorse the same reservations about attending the class he had mentioned in our first session, but when we discussed the discrepancy between his predicted and actual enjoyment of his subsequent evening out with friends, he agreed to give the class a try the next week. In addition, JY, KY and I discussed other activities that might be added to JY's schedule based on our earlier review of past and current activities that JY enjoyed. JY was open to increasing activity in general, but KY stated that she thought scheduling new activities, particularly social activities, would be difficult given their friends' limited availability and JY's difficulty in "getting himself together" for social events. KY mentioned that the party discussed in the first session was the last time they had tried adding a new activity to JY's schedule, and it had been "a disaster" for JY. Based on KY's tone, I surmised that JY's lack of engagement had been a source of embarrassment for her, which led me to wonder whether KY had her own negative predictions about JY's activity engagement. I considered addressing this hypothesis with KY in the moment, but wanted to focus on establishing the homework assignment for the next week.

In addition to attending the exercise class, reading Module 4, and making at least one Thought Log entry, JY agreed to begin the process of shifting his sleep schedule by eliminating his afternoon naps on two days in the next week.

Module 4.

JY reported his mood over the previous week as a 5/10 (10 = best) at the outset of our fourth session, although it became clear that he had experienced periods of very low mood related to conflict with KY over his time management and sleep schedule, and discouragement

about his physical and cognitive limitations. A large portion of the session focused on evaluating JY's negative thought that his physical limitations prevented him from being "useful" to others.

JY reported that he had not attended the exercise class because he had overslept. JY explained that he had felt obligated to work on a computer problem the night before the class, had worked to resolve the issue until 3 AM, and been too tired to go to class. ****This admission led to an argument between JY and KY in which KY criticized JY's time management and JY maintained that his use of use was valuable. JY also had not completed his Thought Log assignment, so I decided to try to help him develop a Thought Log entry based on his thought that he was "useless" when we practiced cognitive restructuring later in the session. JY reported that he had been unable to eliminate afternoon naps over the past week due to the sleep deficit he had incurred in trying to resolve the computer issue, but agreed to try again the following week.

JY and KY had both read through Module 4, and JY had several questions about the cognitive restructuring process. In reviewing examples of cognitive restructuring in Module 4, JY had difficulty understanding how a negative thought could be revised based on evidence, and struggled to evaluate the strength of different pieces of evidence, while KY demonstrated strong command of the "Evidence For And Against" approach. We discussed JY's concerns about being "useless" to others in an attempt to make the cognitive restructuring process more concrete for JY. JY defined his negative thought as: "I'm no use to anyone anymore," and that it was associated with feelings of sadness and worthlessness.. JY struggled to gather evidence against the thought, but with KY's help, JY recognized contributions he makes to their household (e.g. keeping track of bills, solving computer and telephone problems). However, JY said these capacities did not constitute "usefulness to him," stating that he was much more useful when he was the family's primary provider. I asked him if he felt that his retired friends were currently

“useful,” and he said he did, citing the charities, hobbies and community work they were involved in. I asked what he would need to do in order to be sufficiently productive, and he mentioned being able to carry groceries, mow the lawn, drive long distances, and do other chores around the house. I stated that I respected his right to define his own values, but wondered whether there was an element of the cognitive distortion “Unfair Comparisons” in his thinking, since it seemed like he was evaluating his productivity negatively in comparison to a younger, PD-free version of himself, and other friends who were without PD or other significant medical ailments, and when he did compare himself to more functionally limited friends, he showed a deference for their limitations that he refused to show himself. JY struggled with the idea that he might be evaluating himself in a biased way, repeating that he simply “felt useless.” The discussion ended with JY recognizing that different definitions of “useful” were possible, but remaining unconvinced that his assessment of himself was biased.

JY’s homework assignment was to try again to attend his exercise class, read Module 5, eliminate two afternoon naps, and continue to add negative thoughts to his Thought Log. I had hoped to assign cognitive restructuring practice for homework, but based on the conceptual difficulties JY seemed to have in session with this topic, I decided against this.

Module 5.

JY reported a mood rating of 6/10 (10=best) for the week preceding our fifth session. He continued to endorse significant abdominal pain related to constipation, as well as ongoing frustration with his physical and cognitive abilities. JY had attended the exercise class, and contrary to his expectations, he had been welcomed back by class members and leaders. He had found the exercises strenuous, but had not felt in danger of falling or otherwise injuring himself.

He reported feeling very positive about his experience at the class, and emphasized that KY's presence was very helpful to him.

Despite my doubts about JY's ability to benefit from the 'evidence for/against' technique, I felt obligated to maintain focus on this skill given its prominence in the program, and I was encouraged by the fact that JY had recognized that his negative expectations about the exercise class had been violated. We spent much of the session focusing on how to translate JY's experience at the exercise class into insight into 'evidence for/against' restructuring approach.

JY remained concerned that he would be injured in class, so we worked to define his negative thought around this issue. JY had trouble formulating the thought in a way that made it amenable to evaluation, likely in part due to his struggles with English and with abstract thinking, but with assistance from KY and I, he defined his thought as: "If I go to the exercise class, I will get injured." In support of this thought, JY stated that a friend had been injured at the class, and that another class member had fallen several years ago. KY angrily refuted this evidence, saying that the first individual was injured as a result of exercising too intensely, and not because of any problem with the class itself, and that class leaders were very careful about keeping people safe. In addition, she said that the class member who had fallen had done so in the parking lot, not in class. JY agreed with KY's feedback and added additional counterevidence, stating that the class instructors had told him that he looked in "good shape," and that some other class members were more physically limited than he was, but did not seem at risk of injury. I saw his spontaneous generation of effective counterevidence as an advance in JY's understanding of the 'evidence for/against' technique. At several points, JY shifted his attention to other negative thoughts or feelings related to the exercise class or his physical functioning in general, and KY expressed frustration with JY's difficulty staying on task.

JY had eliminated an afternoon nap one day in the past week, and had gone to bed several hours earlier than usual one night. JY reported this information apologetically, but I took pains to praise his incremental progress, and reminded him that adjusting his sleep would be a gradual process.

Since JY had shown better understanding of the 'evidence for/against' technique, I asked him to focus on his other primary worry about the exercise class ("I will feel embarrassed to see the class members and leaders after being away from the class for so long"), and evaluate the evidence for and against this thought for homework using the Questioning Automatic Thoughts (QAT) worksheet in Module 5. In addition, I asked him to continue adding thoughts to his Thought Log.

Module 6.

JY rated his mood as a 5/10 (10 = best) over the previous week. Again, he mentioned feeling sad in situations in which he felt his physical capacities were limiting him, in particularly a concert that he had not attended due to leg pain. We discussed whether the pain might be a result of increased exercise, but this seemed unlikely given the timing of the increase in pain. On the positive side, JY had watched movies with KY and friends the previous Friday evening despite being in pain, and had "forgotten" his discomfort and enjoyed himself thoroughly.

JY had attended the exercise class again, and reported a positive experience. KY said the class instructor had told her that no one had been injured in class, as JY had believed, highlighting JY's mistaken memory in a cutting tone. I framed this information gathering as a good way to add to the evidence we had collected relevant to JY's prediction. However, JY

became more subdued after this exchange, and I worried that the hostile delivery of the message had obscured its value.

JY had avoided naps the previous week, but had stayed up late several nights working on filing his taxes, and been fatigued the day after. I praised JY's completion of the homework assignment, and suggested that we add to JY's sleep-related homework assignments for next week. In attempting to apply the QAT worksheet to the thought "I will feel embarrassed to see the class members and leaders after being away from the class for so long," JY had used evidence that related to his fear of falling and becoming injured, explaining that this was a "bigger fear" than the assigned negative thought, which seemed like a non sequitur to me. JY then had significant trouble identifying relevant pieces of evidence when we tried to apply "evidence for/against" to the assigned thought in session, which surprised me given his relative success in identifying pertinent evidence in the last session.

JY had read through the Module over the past week, but remembered little of the content. I decided to focus on the 'behavioral experiment' strategy, since I felt JY's experience at the exercise class could be framed as an effective behavioral experiment that helped generate new evidence relating to his negative predictions about the class. Interestingly, JY did a good job recognizing the specific pieces of evidence his attendance at the class had added. JY struggled to apply the concept of 'cost/benefit analysis' concept to a thought, and seemed stuck on the economic sense of the term. We agreed to revisit this concept at the next session.

For homework, we agreed that JY would read Module 7, continue to attend the exercise class, and complete an Extended QAT worksheet on a negative thought of his choice. In addition to eliminating afternoon naps, he also agreed to observe a 12 AM bedtime each night in the coming week.

Module 7.

At our seventh session, JY rated his mood over the previous week as a 6-7/10 (10=best). He said he had been feeling more “assertive” and “confident” in the past week as a result of our analysis of his negative thoughts. KY mentioned that JY had reminded KY to go to the exercise class when she had forgotten, and said that he seems more relaxed and comfortable during the class, which she characterized as a “big improvement.”

JY had struggled to go to sleep at our agreed upon time of 12 AM over the last week, and had stayed up “all night” on two nights finishing his taxes and troubleshooting two urgent computer problems. JY said he “needed” to go to bed earlier this coming week, since he had noticed a significant reduction in energy and mental acuity after losing so much sleep. JY had been confused about the homework assignment, and had not completed the Extended QAT worksheet on a new negative thought as assigned, so I focused our practice of the supplementary restructuring techniques on a thought we had discussed the previous session: “I will feel embarrassed to see the class members and leaders after being away from the class for so long.” JY said that finishing his taxes had prevented him from reading through Module 7 or listening to the associated relaxation recordings, but KY disagreed, stating that JY had wasted significant time watching sports or engaged in unnecessary computer activities. She sounded quite upset, and, not wanting to divert focus from the session agenda, I offered to discuss her thoughts at a separate caregiver session, which she declined.

JY’s belief in his “I will feel embarrassed...” negative thought had reduced significantly since he had begun regular attendance at the exercise class, and he had difficulty approaching the practice session as if he still believed the thought. Nevertheless, JY showed improved understanding of several supplementary restructuring techniques over the course of the session,

particularly the 'best/worst/most likely' strategy for restructuring negative predictions. JY also expressed interest in the 'cost/benefit analysis' strategy, and although it took time for him to understand the idea that thoughts could have costs and benefits, once he did, he was able to recognize costs of his negative thinking, e.g. that negative predictions about activities can interfere with positive experiences,.

Since JY had not read through Module 7 for homework, we agreed that he would read both Modules 7 and 8 and listen to the relaxation recordings included with Module 7 prior to our next session. I decided that recent homework assignments had been too ambitious, and did not assign further homework.

Module 8.

At the outset of our eighth session, JY rated his mood over the past week as a 7/10 (10 = best). He said he had been feeling more energetic, and noticed growing confidence at exercise class, but had been frustrated by increases in abdominal pain.

JY had read Modules 7 and 8, but had not been able to listen to the relaxation recordings from Module 7 due to a computer problem. JY and I spent 10 to 15 minutes of session time trying to diagnose the problem, and finally succeeded in getting the recordings to play. Since JY had not listened to the relaxation recordings from Module 7, and since sleep difficulties continued to be a significant issue for him, I initially focused on the Sleep Hygiene strategies covered in Module 8. An assessment of JY's adherence to the listed sleep hygiene principles indicated he had little to improve on, JY reported minimal difficulty falling asleep once he got in bed.

JY explained his late-night computer use by saying that it was one of the few activities engrossing enough to take his mind off his abdominal pain and negative thoughts, and that he often lost track of time, and ended up staying up later than intended. We revisited the pros and cons of adjusting his sleep schedule, and he concluded that he wanted to get to bed earlier, even if it meant giving up time on his computer at night. JY agreed to refrain from napping on Monday, Wednesday and Friday, and to go to bed by 11 PM on Monday, Tuesday and Wednesday of the following week.

JY then brought up a situation that he saw as relevant to the worry control techniques described in Module 8: he had recently received a call from a good friend, and had been putting off returning the call because he worried that his friend would be disappointed or feel uncomfortable that JY had “nothing positive to report” about his health. We applied the ‘worst case/best case/most likely’ strategy to this thought, and in reviewing past conversations with this friend, could find no evidence supporting the likelihood of the ‘worst case’ scenario, which JY defined as his friend ignoring or pitying him. KY was helpful in reminding JY of past instances in which he had called his friend, and offered her input with a lighter touch than she had in previous sessions. JY decided that the ‘most likely’ outcome of the call was that he would feel uncomfortable sharing his difficulties with his friend, but that ultimately the conversation would lift his spirits, and provide him a refreshing perspective on his situation. At the end of the discussion, JY resolved to give his friend a call during the next week.

As additional homework, I asked JY to read Module 9, listen to the relaxation recordings associated with Module 7, and continue his exercise class attendance.

Module 9.

At the beginning of our ninth session, JY rated his mood over the past week as a 7/10 (10 = best). JY said he felt his activity engagement had left him “exhausted.” He reported exercising twice, playing mah-jongg, spending two evenings socializing with friends, and had also stayed up late on several nights.

JY had listened to the relaxation recordings, but had trouble engaging with the guided visualizations, stating that he found himself unable to “picture images in his head.” Thus, we agreed he would focus on the Complete Natural Breathing and Progressive Muscle Relaxation exercises for the following week’s homework. JY had tried both, and had found Complete Natural Breathing to be helpful in distracting himself from pain. JY had met his goal of going to go to bed around 11 PM on two of the three nights we had agreed on at the previous session, but had stayed up late trying to fix a printer problem on the third night. JY said that his commitment to go to be at 11 had crossed his mind that night, but that he had gotten too “excited” about the fixing the printer. It became clear that JY’s excitement was directly related to his negative thought that he was “useless” mentioned in session 4: JY saw his usefulness as so limited that he could not pass up any opportunity to be useful. The degree of value JY placed on usefulness was striking to me, but I recognized it as consistent with my understanding of the worldview of members of a collectivist culture. It seemed likely there were important negative thoughts associated with the idea of usefulness, but I wanted time to prepare to approach these thoughts in a culturally sensitive way, so I decided to table the topic for the moment.

JY had exercised both Monday and Wednesday, and played mah-jongg on Tuesday, which I took care to praise. However, JY said he felt exhausted each of these days, and worried that he was “doing too much.” Since exercise class scheduled was fixed, we discussed whether

he could play mah-jongg for a shorter time, or at a time later in the week, so that he would not have so much activity concentrated early in the week. However, due to the constraints of other players' schedules and the nature of the game, JY decided these were not viable options.

For the rest of the session, we discussed the central topic of Module 9, 'simplified cognitive restructuring.' I attempted to engage JY in a review of the important negative automatic thoughts we had restructured in treatment to date, but he focused on his belief that he was "useless," which had not been fully reframed previously, and due to my sense that this thought was of paramount importance, I decided to spend time discussing this thought first. During this discussion, KY provided counterevidence for this thought in a way that emphasized her being "right," and I became concerned that her delivery might make it harder for JY to digest and incorporate the KY valid evidence. I emphasized the importance of JY's perspective on the evidence KY presented, while validating the relevance of the information KY was bringing to the table. However, it seemed that my attempt came too late, as JY seemed shut down after this point, and deferred to my opinion or KY's opinion on the relative importance of various pieces of evidence. I was conflicted about whether to continue with the 'evidence for/against' approach, since from my perspective, there was convincing counterevidence for this thought, but I did not want to be dismissive of his definition of usefulness, and I worried that continuing to use this approach ran the risk of KY continuing to attack JY, so I suggested that we try to apply a 'cost/benefit analysis' approach to the thought. JY initially had trouble shifting his focus away from evaluating the validity of the belief, but ultimately was able to consider its impact on his mood, which he recognized as decidedly negative. In retrospect, I think I became distracted by the interpersonal dynamics between JY and KY, and we ultimately focused on the "useless"

thought for much of the session, and never returned to the topic of 'simplified cognitive restructuring.'

In addition to reading Module 10 and continuing to pursue his sleep goals, I asked JY and KY to collaborate on filling out an Extended QAT worksheet on his thought "I am useless" for homework. I had some misgivings about asking them to collaborate on this homework, given their interpersonal difficulties in session, but I decided to give them the benefit of the doubt.

Module 10.

At the outset of our 10th session, JY rated his mood for the past week as a 5/10 (10 = best). He said his abdominal pain had been significantly worse, and had learned that he would need a surgical procedure to correct an eye problem, both of which had negatively impacted his mood. However, he said that considering these challenges, he felt he had done a good job maintaining a positive outlook and engaging in planned activities. Additionally, although he had lost in mah-jongg, this had not lowered his mood as it had in the past. When I asked why he thought the loss had not bothered him, he said he had "just thought positive," but had a hard time explaining further. JY had attended exercise class twice, refrained from napping during the day, and gone to bed earlier than usual, although there were two nights when he stayed up well past 2 AM working to resolve computer problems.

As I had feared, JY and KY had struggled to complete the Extended QAT worksheet together. They had made an effort to complete the worksheet early in the week, but this had ended in an argument, and they had not made further attempts. The argument seemed to have developed out of KY's frustration with JY over his inability to do 'evidence for/against' technique the "right way" from her perspective, and JY's resentment of her criticism. Since it

seemed that the 'evidence for/against' technique leant itself to conflict between JY and KY, and it was our last formal session, I felt it was important to focus on one of the additional cognitive restructuring approaches as an alternative. After reviewing the main concepts and skills from the program described in Module 10, we spent the rest of the session focusing on the 'cost/benefit analysis' cognitive restructuring technique, which JY had responded positively already, would be relatively straightforward, and seemed less conducive to conflict than "evidence for/against." In discussing 'cost/benefit analysis' in session, JY again struggled with the idea of a thought having a "cost" or "benefit." KY suggested that JY's thoughts played a role in their conflict earlier that week, and I thought this situation might be a fruitful example, and framed KY's contribution as "one cost of a thought might be that it influences your behavior in a way that interferes with relationships." JY stated that he had been quite upset after their argument, and recognized this distress as a 'cost' directly related to thoughts about KY and about himself stemming from their interaction.

For homework, I asked JY and KY to do a 'cost/benefit analysis' of the thought "I am useless." Feeling that addressing the interpersonal problems between JY and KY directly with KY was crucial to the success of JY's treatment, I asked KY if she would be willing to have a private conversation with me about her role in helping JY benefit from the program after its conclusion. KY agreed, and we set up our call in addition to JY's first booster session.

KY caregiver session & booster session 1.

In my conversation with KY, I first tried to validate her frustration with JY's resistance to taking steps to improve his health and functioning (e.g. altering his sleep schedule), expressed my appreciation for her consistent involvement in our sessions, and complimented her

understanding of program concepts. I also shared my hypothesis that JY sometimes experienced her feedback as critical rather than constructive, explained the observations that had led me to this hypothesis, and emphasized that if my hypothesis were correct, there might be ways for her to alter her approach to providing feedback that would help JY incorporate her input more effectively, which would in turn reduce her frustration with him and promote a more positive relationship. Initially, KY was defensive, emphasized JY's role in their conflicts, and defended her style of delivering feedback. I suggested that we look at her approach to JY from a 'cost/benefit analysis' perspective. We agreed that it was useful for her to provide JY with input in general, but the primary cost to KY's current approach was that both she and JY were frequently arguing, which distressed them both and interfered with engagement in positive activities (e.g. socializing with friends). I asked if KY was willing to try an experiment to test whether there might be a way to keep the benefits of offering JY feedback while avoiding conflict. KY was incredulous, but admitted that she did not usually think about how she delivered feedback to JY, and could not be sure whether another approach might be more effective. I proposed several possible techniques KY might use as part of an alternative approach (e.g. think about what JY's perspective might be before addressing a grievance, start her feedback with compliments or validating remarks to communicate care and respect). KY then described a conflict that had arisen in a social setting and had created particular tension, and she and I discussed how she and JY might handle a similar situation in the future. Over the course of the conversation, KY grew more open to the idea that she might have a role in her conflict with JY.

JY, KY and I spent the booster session reviewing the situation KY had mentioned in our private session, and working on a plan to resolve conflict in similar situations in the future. In

this situation, JY to become offended by a comment KY had made. He had not expressed his feelings in the moment and had withdrawn from others at the party, but later expressed anger with KY for not apologizing for her comment and for not acknowledging his distress after this incident. KY had refuted his interpretation of her comment, and felt JY's criticism was unfair and "irrational." One important negative thought derived from this incident was that he "did not matter" to KY. During the discussion of this incident, both KY and JY seemed to be embodying their attitudes and behaviors in that moment, so I used their interactions in session as a way to review for KY, and introduce to JY, the effective communication principles I had discussed with KY, which I had loosely adapted from the 'Interpersonal Effectiveness' skills module of Dialectical Behavioral Therapy (Linehan, 1993). We devised a plan for preventing similar conflict at future social events in which JY would use an agreed-upon signal to indicate to KY if he was feeling upset and needed to touch base with her, and they would then find a private location to discuss his feelings. I had hoped to address the 'cost/benefit analysis' homework from the previous session as well, but felt that our discussion about conflict resolution should be a top priority, and agreeing on a workable plan ultimately took the full session time.

For homework, I asked KY and JY to try to put their plan into action if the opportunity arose, and to schedule a positive, one-on-one activity together. We scheduled our next booster session for two weeks later.

Booster session 2.

At our second booster session, KY and JY reported that they had not had an opportunity to put their conflict resolution plan in action, as many of their friends had been on summer vacation, limiting social engagements. They had decided to take a walk together as their positive

joint activity, but had ended it early because JY had felt he was “too slow” for KY. JY reported that his mood over the last two weeks had been “positive” despite ongoing uncertainty about the source of his steadily increasing abdominal pain. He attributed his mood in part to the recent birth of his granddaughter. However, JY also said it was very difficult for him to be unable to help his daughter and her husband as much as other family members following the child’s birth due to his physical condition.

We revisited JY’s ‘cost/benefit analysis’ of his negative thought “I am useless,” which JY and KY had completed prior to our last session. KY occasionally veered into ‘evidence for/against’ territory by pointing out instances in which JY was useful (e.g. holding the door, carrying a bag), but I worked hard to keep the focus on the consequences of JY’s thought. KY then expressed the concern she and other family members had felt at seeing JY withdrawn and morose during their visit with their granddaughter. This information seemed to take JY by surprise. He said he had not realized that his mood could affect those around him in such a significant way, and that this was a very significant negative consequence of his negative thoughts.

Much of the remainder of the session was spent discussing JY’s and KY’s experience using the principles of effective communication we had discussed at our last session. KY said she had used these principles several times, and reported being surprised that JY responded more openly to her feedback when she opened her statement with a compliment or validation of his perspective. JY said he had not remembered to use the principles as much as KY, but expressed his appreciation for the effort KY had been making to do so, and said he had experienced KY as “less angry” in recent weeks, which had made it easier for them to talk. I praised their

willingness to change their interaction style, and to discussing their experience of this process with each other and with me.

Case discussion.

Working with a hostile caregiver.

Several aspects of JY's treatment warrant further discussion. I will focus on KY's role in treatment, but also discuss the role of cognitive deficits, communication difficulties, and cultural background in treatment. My hope is that these discussions will yield insights that may be valuable to other clinicians working with similar cases.

KY's participation in JY's treatment was both a great blessing and an enormous challenge. KY was present for most of our sessions, read the modules religiously, had a stronger grasp of the program concepts than JY, and helped translate when I had difficulty understanding JY. In all these ways, she was an invaluable asset to JY's treatment. However, she frequently delivered her perspective on JY's difficulties in a harsh, critical manner, and frequently implied or stated that JY's difficulties were a result of his laziness, obstinacy or irrationality. I saw my task as maximizing KY's positive contributions while limiting her negative impact on JY's treatment. In the following pages, I describe a representative example of KY's impact on treatment. I then describe my efforts to accomplish the task stated above, including discussion of relevant contextual factors related to the treatment modality and my own identity as a clinician. Finally, I review the lessons learned from these efforts that I feel will be most useful to clinicians working with caregivers.

Throughout JY's treatment, KY frequently presented very useful feedback in a manner that left JY feeling attacked, and, I hypothesize, limited his ability to incorporate the feedback or

engage with program material. A particularly notable example of this scenario occurred in our second session as we discussed adding the exercise class to JY's Activity Schedule. JY had voiced concerns about the exercise class: a) that he would be too physically compromised to benefit from the class, b) that he would fall and injure himself, as others class members had in the past, and c) that he would feel embarrassed to face the class leaders and other class members after having ignored their phone calls encouraging him to return to the class two years ago. KY responded to each of these points with cogent and convincing counterevidence: in response to a), she stated that the class was designed to accommodate people with a wide range of physical abilities, and pointed out that there had been people in the class who were more physically limited than JY. In response to b), she stated that the class member who had been injured had fallen in the parking lot, not in the class itself, indicating that the class itself did not pose a danger, and added that the class leaders were well trained and attentive to class members' safety. In response to c), she said she thought it was unclear how many of the class members or leaders from two years ago would still be involved in the class, and that those who were would likely not remember the circumstances surrounding JY's failure to return to the class. However, the tone with which she delivered this evidence was caustic, and seemed to have the effect of shutting down JY's engagement in the discussion: when I asked him what he thought about the points KY was bringing up, he said he "didn't know," and asked me what I thought about them.

This situation, and others like it, presented me with a dilemma as to whether to address the positive parts or the negative parts of KY's contribution. On one hand, it seemed important to capitalize on the useful parts of KY's feedback, and to do so quickly, since JY's difficulties with working memory often left a narrow window of opportunity for consolidating skill acquisition. In the example above, JY and KY were engaged in an evaluation of JY's thought

that anticipated the 'evidence for/against' cognitive restructuring technique, and I saw an opportunity to preview cognitive restructuring skills and introduce the importance of recording negative thoughts using the Thought Log. In addition, at this point in treatment, I did not know KY or JY very well, this was the first instance in which KY had expressed such pointed criticism, and given JY's clear cognitive and functional deficits, I saw KY's participation as crucial to JY's treatment, and I was very concerned that I might alienate her if I suggested that her communication style was unproductive. On the other hand, JY's reaction to the criticism in KY's delivery made it harder for him to process KY's input or mine in these moments. In addition, I worried that by not addressing the hostility in KY's message, I might be tacitly condoning her behavior, and that waiting to address this issue early on might make it more difficult to address later.

Early in treatment, my fear of alienating KY held sway, and my solution to the dilemma described above was to focus on the productive parts of KY's comments, and not directly address my concerns with KY's critical delivery. However, as treatment continued, I realized that this interpersonal pattern was a pervasive part of the relationship between JY and KY, and I began to worry that if not addressed, it might have a lasting impact on JY's ability to benefit from the program. The turning point in my thinking on the issue was the discussion of the conflict between JY and KY resulting from their attempt to collaborate on the Extended QAT homework assignment in our 10th session. At this point, I became convinced that it was of paramount clinical importance to help JY and KY improve their communication and strengthen their relationship.

For several reasons, my first step in addressing the conflict between JY and KY would be to speak to KY individually about my concerns. First, I wanted KY to feel that I respected her

perspective, and felt that setting aside time to speak with her individually was important in communicating this message. In addition, I worried that if JY were present during this discussion, KY might not feel that she could be fully honest about her frustrations, and I also wanted to shield JY from KY's criticism as much as possible. In addition, I planned to suggest to KY that the harsh, critical way in which she delivered feedback to JY was counterproductive, and I worried that JY's presence during this discussion might make her feel embarrassed or ganged up on, and make her more likely to be defensive or resistant to my input. My conversation with KY went as well as I could have hoped: she did vent a great deal of frustration with JY, and was initially defensive when I asked her to consider her role in their difficulties, but she also expressed respect for my opinion, and genuine interest in improving her relationship with JY. In an interesting parallel to JY's response to cognitive restructuring, KY responded best to my input when I shifted her focus from justifying the validity of her frustration to a 'cost/benefit analysis' of the manner in which she expressed her frustration. She said she had not given much thought to the way she communicated with JY, but when I cited several interactions in which I felt JY had become disengaged or distant after she expressed herself in a way that seemed overly critical, and suggested that taking a different approach might help promote the changes she hoped to see in JY, KY expressed openness to the possibility that he might respond differently to a softer approach. We reviewed a number of Interpersonal Effectiveness (Linehan, 1993) principles that I thought were particularly relevant to KY (e.g. demonstrating care and respect for the other person's perspective even if you disagree with it, demonstrating willingness to compromise, rewarding incremental concessions to your agenda). Although KY was doubtful they would be effective, she agreed that they were worth trying. I provided some examples of

how she might apply these principles in communicating with JY, and in our next session, I noticed her implementing these principles.

The next step was to bring JY into the conversation at the next session, and in doing so, I felt it was important to keep several principles in mind. First, I introduced JY to the same Interpersonal Effectiveness principles I had presented to KY, both because I did not want her to feel that she was the only one who needed to make an effort to adjust her communication style, and because I thought JY might benefit from using the same principles, although given JY's difficulties with abstraction and memory and the minimal session time we would be able to devote to these skills in the booster phase of treatment, my intent was for KY to be the primary practitioner of these skills. Second, given JY's concreteness, I thought it would be useful for us to collaborate on a conflict resolution technique based on a recent instance, and the most readily available example involved the incident that KY had brought up in our individual session, in which JY felt dismissed by KY, and KY felt inappropriately blamed for not perceiving JY's distress. It later became clear to me that practicing this strategy would be difficult for JY and KY due to the unavailability of social engagement over the summer, and in retrospect, it likely would have been more useful to instead focus on techniques for managing conflict around ongoing issues between JY and KY, e.g. his sleep schedule.

Based on our discussion in the second booster session and the exit interview, it seemed that KY had been able to elaborate the Interpersonal Effectiveness principles we had discussed in a number of very helpful ways. In the exit interview, KY mentioned that since our last conversation, she had decided to experiment with monitoring JY's activities less closely and "give him more space," and had noticed that, much to her surprise, he had been largely successful in managing his medication regimen and other routine chores, the frequency of their

arguments had dropped considerably, and JY seemed more self-confident. She also said that instead of imposing her perspective on JY's negative thoughts, which had been her habit in the past, she had begun to "put the ball in JY's court" by suggesting that he try to restructure his thought, and only offering her opinion when he asked for it. She reported that this approach had lead JY to more readily accept the input she had to offer, and had also pushed him to continue to develop his cognitive restructuring skills. In addition, she said that our discussion about her interactions with JY had helped her put herself in his shoes, and had recognized that some of her expectations of JY (e.g. how fast he could prepare for social events) were unreasonable. JY also stated that he felt his relationship with KY had improved considerably since the end of the program, and that they were better able to work together to resolve issues, rather than arguing about or avoiding them. Overall, I was very pleased and impressed by the way JY and KY had built upon the work we had done to improve their interactions at the end of the treatment.

In reviewing the lessons learned from my efforts to optimize KY's participation in treatment, one of the most significant was that being willing to directly address problematic interpersonal dynamics between patient and caregiver can be crucially important to treatment success. In retrospect, I wish I had addressed this issue with JY and KY sooner. Although the exit interview led me to believe that they benefited a great deal from the time we did spend working on their relationship difficulties, spending more time on this topic very likely would have increased JY's ability to benefit from the program, and made the experience of participating in the program more pleasant for both he and KY. As mentioned above, I think my fear of alienating KY played a primary role in my hesitance to address this issue early in treatment, as well as my sense of obligation to spend as much session time on the content of the TH-CBT program as possible. Physical, psychological and functional impairment are common amongst

caregivers of PD patients and others with chronic medical illnesses (Martinez-Martin et al., 2005; Happe & Berger, 2002; Glueckauf, 2003). Thus, it is important for clinicians working with caregivers of patients in these populations to assess caregiver burden. This can be achieved through formal assessments, like the Caregiving Distress Scale (Cousins et al., 2002) that was used in Dr. Dobkin's research, and also by paying attention to interpersonal dynamics in session (if both are present), or by asking both patient and caregiver about the quality of their relationship.

In addition, in a skills-based treatment like the TH-CBT protocol with a patient who has significant cognitive and functional limitations, as JY did, I think it is particularly important to address interpersonal problems between the caregiver and the patient. If such issues are left unresolved, they may interfere with the caregiver's ability to support the patient's skill utilization, running the risk that much of the benefit of the program may be lost. It is hard to predict JY's progress in the program had the difficulties in his relationship with KY been addressed earlier, but it did seem clear to me that once these issues were addressed, they were able to work together much more effectively to apply program concepts and skills to JY's challenges.

Lastly, if making adjustments to the patient-caregiver relationship is likely to be driven by the caregiver, as was the case with JY and KY, I think it is important for the clinician to clearly highlight the ways in which these changes may benefit the caregiver in order to make the their effort seem worth while, and not just "something else I have to do," as KY initially described my proposal in our individual session. I think my focus on how changing her communication style with JY might help her get needs met (e.g. help JY benefit from the study

and improve his mood, reduce JY's dependence on her, was very helpful in persuading KY to give these suggestions a try.

Working with cognitive deficits.

JY's cognitive deficits also played a significant role in the course of our treatment, and a discussion of these deficits, their relationship to the treatment setting and protocol, and my efforts to cope with them, may be instructive to clinicians treating patients with similar difficulties. Based on JY's MoCA score, he would likely have been classified as having mild cognitive impairment (MCI) (Nasreddine et al., 2005), which is defined as "cognitive decline greater than expected for an individual's age and education level but that does not interfere notably with activities of daily life" (Gauthier et al., 2006), and applies to cognitive domains including memory, reasoning and language. MCI is twice as common in PD patients as in healthy age-matched controls (Aarsland et al., 2009; Foltynie et al., 2004), and is present in 27-50% of PD patients within 3-5 years following diagnosis (Williams-Gray et al., 2007; Janvin, Larsen, Aarsland & Hugdahl, 2006; Caviness et al., 2007). PD patients who demonstrate MCI show particular deficits in executive functioning, working memory, set shifting and reinforcement learning (Bowen, Kamienny, Burns & Yahr, 1975; Owen et al., 1992; Morris et al., 1988; Taylor & Saint-Cyr, 1995; Cools, Barker, Sehakian & Robbins, 2003; Kehagia, Cools, Barker & Robbins, 2009). JY showed particular deficits in short and long-term memory, abstract reasoning and learning, and these deficits created significant challenges in implementing treatment.

I experienced JY's memory as one of the poorest among all the patients I treated in the GSH-dPD and TH-CBT studies. He regularly forgot to do homework assignments despite my

sending him reminder e-mails outlining the assignments in detail, and had significant difficulty retaining knowledge of program concepts from week to week. In addition, he often relied on KY to remind him of names, dates, and the details of past events, and at times his memory issues became a point of contention between he and KY, e.g. when he erroneously recalled an exercise class member injuring themselves during class. At the exit interview, when I asked him what program concepts or skills he found to be most useful, he had trouble coming up with anything other than “thinking positive,” and required significant prompting before recalling the impact of applying ‘cost/benefit analysis’ to negative thoughts relating to his sense of uselessness, which I saw as one of the most important successes in his treatment. In addition, JY’s working memory seemed to be poor, as evidenced by his tendency to change the subject to a tangentially or seemingly unrelated topic during session, and seemed unaware that he had taken the conversation in another direction. In addition, KY often complained of his forgetfulness and poor time management, particularly in the context of getting ready for social engagements. It is possible that avoidance, or miscommunication resulting from cultural differences or English being JY’s second language, contributed to this pattern, but I think it is likely that JY’s cognitive deficits were primarily responsible.

JY also showed significant difficulty with abstract reasoning and learning. The former was particularly evident in our work on cognitive restructuring, which I believe is the most conceptually demanding skill in the TH-CBT program. JY struggled to internalize the essential properties of cognitive distortions such that he could accurately identify the distortion at play in a novel example scenario. In addition, JY had great difficulty formulating negative thoughts in a way that made them amenable to evaluation (i.e. that made a statement about the world, self or future), often struggled to come up with salient pieces of evidence, and had trouble synthesizing

the 'for' and 'against' evidence in order to come to a conclusion about the validity of a given negative thought, or generate alternative perspectives based on the evidence.

JY struggled to shift cognitive sets, and frequently perseverated on his initial understanding of a concept despite receiving feedback to the effect that his understanding needed adjustment. For example, when the 'cost/benefit analysis' skill was introduced, JY expressed familiarity with this term in an economic context, and had great difficulty applying the term to a psychological context, often seeking to connect our discussion of this skill to his financial status or some other economic topic. JY ultimately was able to develop an understanding of the 'cost/benefit analysis' skill as described in the program, but this required an unusual amount of support and guidance from KY and myself.

JY's cognitive deficits had significant impact on treatment. First, they increased the importance of KY's involvement in treatment, since her understanding of the material could help compensate for JY's comprehension difficulties, both in terms of practicing skills between sessions and maximizing JY's benefit from the program over the long term. As a result, I encouraged KY's presence at as many of our phone sessions as possible, and felt more hesitant to risk alienating her by addressing her critical attitude towards JY. Once it became clear to me that the interpersonal difficulties between JY and KY were significant and pervasive, finding a way for JY and KY to communicate more effectively became a top priority, because I felt that JY's cognitive deficits would make it difficult for him to continue to engage with and benefit from program skills without significant assistance from KY.

Additionally, JY's difficulties with abstract reasoning and learning ultimately led me to deemphasize 'evidence for/against' skill and focus our cognitive skill building on the 'cost/benefit analysis.' In retrospect, I wish I had made this shift in emphasis earlier in

treatment, as I suspect that our session time would have been better spent on more tractable skills. I think I waited as long as I did because the program emphasizes 'evidence for/against' so much, because I have seen it become a very powerful tool for other patients, and because JY showed occasional flashes of comprehension that gave me false hope he would eventually be able to develop reliable facility with this skill.

There are several important lessons I took away from my experience managing JY's cognitive deficits that may be useful to clinicians working in a similar treatment modality with cognitively challenged patients. First, if the patient's cognitive deficits seem to be interfering with acquisition of a particular skill, it may be useful to search for a different skill that serves the same function (e.g. aids in cognitive restructuring) but makes fewer demands on the patient's cognitive capacities. Understanding the particular domains in which the patient shows cognitive deficits can help with this process. For example, since new learning and set shifting are particular challenges for PD patients, seeking to capitalize on previously learned skills, concepts or analogies may be useful in determining which skills to emphasize and how best to present these skills. In JY's case, although his set-shifting difficulties initially interfered with his integrating the 'cost/benefit analysis' skill, I hypothesize that his prior familiarity with this concept in an economic context was helpful in his long-term integration of this skill. When the 'cost/benefit analysis' skill was reintroduced in session, JY would often "retrace" his route of understanding from the economic sense of the term to its meaning in the context of the program, leading me to believe that his familiarity with the economic sense of the concept served as a useful foundation for understanding the CBT skill.

Secondly, promoting the caregiver's understanding of skills and concepts, and helping them practice facilitating the patient's use of these skills, are very important means of mitigating

the effects of a patient's cognitive deficits on treatment. Strong cognitive functioning on the part of the caregiver is important for this process to take place. Luckily, KY's cognitive capacities were excellent, and my challenge was not in helping her grasp the program material, but in helping her communicate with JY in a way that did not interfere with her support of his skill use. In scenarios in which a patient has significant cognitive deficits prior to treatment and multiple potential caregivers are available to choose from, it is recommended that prospective caregivers' cognitive capacities be assessed and weighted more heavily in the caregiver selection process.

Lastly, I suspect that KY was not fully informed about the cognitive impacts of PD and MCI, and given the fact that she frequently complained about JY's forgetfulness, poor time management and lapses in reasoning, I think it would have been helpful for me to spend more time educating KY on these issues. This might have helped her approach JY with more patience and compassion, thus improving their relationship, and also may have empowered her to come up with problem-solving strategies to cope with JY's deficits, thereby reducing her caregiver burden. For clinicians working with patients with cognitive deficits and their caregiver, I recommend that the clinician at least assess the caregiver's understanding of the patient's cognitive deficits and their implications, and provide psychoeducation and problem-solving support regarding these deficits to the caregiver if needed.

Working with communication difficulties.

From my perspective, JY's case was complicated by language/communication difficulties and cultural differences. JY was a first generation immigrant from China, and had learned English as a second language, and although his English was clearly good enough for him to have functioned at a high level professionally in the United States, I had significant difficulty

understanding him over the phone throughout our treatment, and based on his patterns of response, I suspect that he struggled to understand me at times, although this was never confirmed. To some extent, I believe our communication difficulties resulted from idiosyncrasies and deficits in JY's usage of English, and my difficulties in simplifying my speech and deciphering his. In addition, I suspect that PD-related speech problems, his accent, and the telephone-based treatment modality contributed to this difficulty.

JY was not thoroughly evaluated for verbal fluency, so it is hard to quantify his facility with the English language, but my experience was that his vocabulary was limited, and that he often left out parts of speech (e.g. articles, prepositions) in a way that made it difficult to grasp his meaning, particularly in combination with the other factors listed above. My impression that JY had trouble understanding me was not directly assessed, but he had a tendency to change the subject or respond in a way that did not follow from my previous statement, and although this may have more to do with avoidance or general cognitive deficits than language problems, I suspect that comprehension problems were at play to some extent. Additionally, research suggests that 49-70% of PD patients exhibit speech deficits (Hartelius & Svennson, 1994; Logemann, Fisher, Boshes & Blonsky, 1978). These deficits include more frequent and significant hesitation during speech, decreased speech volume, and poorer articulation (Illes, Metter, Hanson & Iritani, 1988; Ho et al., 1998). JY was not formally assessed for speech pathology, but in my experience, his volume was sufficient, but poor articulation and high speech latency were present. I often had trouble distinguishing one word from another when JY spoke, and the halting quality of his speech made it difficult to know when he had finished a thought, which led me unintentionally interrupt him on a regular basis. In addition, JY's accent, which led the inflection of his speech to differ from my expectation, added to my difficulty in

understanding him. Additionally, over the course of treatment, it became clear that the quality of my telephone connection significantly impacted my ability to understand JY. I found landlines to be generally more effective, that my cell phone provided a clearer signal than calling from my laptop, and that certain parts of my apartment allowed for a clearer signal as well.

The main impact of my difficulty in understanding JY was that our sessions were less efficient. I frequently asked JY to repeat himself, and based on prior experience, worried that this might interfere with our rapport, but luckily, JY never seemed bothered by these requests. However, the inefficiency of our communication, on top of the difficulty keeping JY on topic, influenced my decision-making during the course of our sessions. Later in treatment, I began factoring in communication inefficiency as I prioritized the material I planned to cover in session, and if communication issues were slowing our progress in session, I would sometimes decide to either focus on the current topic even if that meant other topics would fall by the wayside, or to table the current discussion and move on to more important topics.

In managing my communication difficulties with JY, I learned that simplifying my language seemed to improve JY's comprehension, and modeling slow, loud, over-enunciated speech seemed to encourage JY to alter his speech in the same ways, thus improving my comprehension. It found it challenging to keep these strategies in mind while focusing on session material, but as treatment progressed, I was able to integrate these tasks more easily. In addition, I learned that the details of my telephone connection made a significant difference in my ability to understand JY, and, I believe, to be understood by him. The optimal combination of factors may vary, but I would encourage clinicians conducting telephone sessions with patients who have communication problems to experiment with the type of device used, the type

of connection used (i.e. landline vs. wi-fi), and the location from which the call is made when using a cellular device.

Working with cultural differences.

I believe JY's cultural background and its interaction with program concepts and skills also played a significant role in his treatment. The automatic thoughts derived from JY's negative appraisal of his "usefulness" were a major focus of cognitive restructuring in treatment. JY's concern with being a burden and contributing to the greater good were not unusual, but I was struck by the profound importance JY attached to this issue, and the rigidity with which he held to expectations of his usefulness that seemed unreasonable to me. JY seemed preoccupied with his "usefulness" much of the time, and in Session 9, it became clear that his pattern of staying up late to fix various computer problems stemmed from his belief that completing these tasks was one of the few remaining ways in which he still felt he could be "useful." Collectivist cultures, including traditional Chinese culture, promote interconnectedness, respect for elders, and deference to the needs of the family unit or wider community, in contrast to Western values, which traditionally promote independence, autonomy, and personal attainment (McGoldrick, Giordano & Garcia-Preto, 2005). Thus, I interpreted JY's focus on being useful as culturally mediated and appropriate.

In treatment, I first tried to apply the 'evidence for/against' cognitive restructuring technique to these thoughts, but despite being provided with what I saw as a significant amount of evidence that his expectations of his usefulness were unfair given his current condition, I was unable to help JY recognize alternative perspectives or loosen his attachment to the negative thought. However, thoughts related to his uselessness were causing him significant guilt and

sadness, and I felt it was imperative that we find a way to help him cope with these. I decided to shift our focus to a 'cost/benefit analysis' of his 'useless thoughts,' and although initial gains were small, but in Booster Session 2, an opportunity to leverage JY's concern for the greater good to help him combat these thoughts. He had been feeling very guilty and ashamed about not being able to assist his family members as much as he would have liked during a recent trip, and KY mentioned that his subsequent withdrawal and low mood had made his family members very concerned about him. JY seemed surprised at how much his low mood had impacted his family members, and was able to recognize this impact as a significant "cost" of his negative thoughts.

At our exit interview, JY said that this discussion had made a lasting impression on him, and that framing the impact his low mood had on others as a "cost" of his negative thinking had been very helpful in motivating him to reject negative thoughts, regardless of their validity, and search for the "most positive way" to look at a situation. JY said he believed this approach had led to significant improvements in his mood, and KY agreed. From my perspective, JY had leveraged the collectivist cultural emphasis on putting the needs of the group ahead of those of the individual in a way that helped him combat his negative thinking and improve his mood.

The most important lesson I learned in working with issues of culture in JY's treatment was the importance of assessing how a patient's cultural background meshes with certain treatment approaches. I think this principle is particularly applicable to cognitive approaches like those presented in the TH-CBT program, because their engagement of patients' beliefs and worldview makes them more likely to interact with a patients' cultural values. In the case of JY, after making an initial attempt to use 'evidence for/against' to restructure his negative thoughts around his perceived uselessness, I concluded that pursuing this technique was unlikely to be successful, and risked showing insensitivity to JY's cultural background. The 'evidence

for/against' technique relies on the idea that the validity of a thought can be evaluated through consideration of relevant evidence, but values, including cultural values, influence the weight attached to various pieces of evidence, and thus, whether the patient will find gathered evidence convincing. When JY maintained the validity of his assessment that he was "useless" in the face of what I considered strong counterevidence, I hypothesized that his cultural values might be leading him to dismiss the significance of this evidence, a perspective that might be summarized as 'although I recognize that I may not be capable of meeting my standards of 'usefulness,' these standards are dictated by my cultural beliefs, and maintaining them is essential for me.' Thus, I decided to address these thoughts using the 'cost/benefit analysis' approach, which focuses on a thought's positive and negative consequences instead of its validity. Certainly, this technique could have run into problems similar to the 'evidence for/against' technique faced, since JY's cultural values might have influenced the relative importance of the costs and benefits of his 'useless' thoughts, and JY might have concluded, as an example, that 'although the costs of seeing myself as 'useless' lead me to feel sad, guilty and ashamed, maintaining this perspective helps me stay connected to my heritage, a benefit I am unwilling to give up.' However, this scenario seemed unlikely to me, and luckily, the 'cost/benefit analysis' technique became an effective tool to help combat JY's 'useless' thoughts, arguably *because of* his collectivist cultural beliefs.

Table 1. Quantitative Outcome Measures

		T1 (Intake)	T2 (6 weeks)	T3 (11 weeks)	T4 (15 weeks)	T5 (35 weeks)
HAM-D	GM	19	12	7	7	N/A
	FJ	18	N/A	N/A	N/A	N/A
	WJ	28	16	17	12	11
	JY	22	20	21	15	23
BDI	GM	23	14	5	8	N/A
	FJ	20	N/A	N/A	N/A	N/A
	WJ	28	17	17	16	10
	JY	19	20	25	22	30
HAM-A	GM	19	15	17	16	N/A
	FJ	13	N/A	N/A	N/A	N/A
	WJ	27	21	19	19	15
	JY	23	20	23	18	21
CGI	GM	Moderately Ill	Much Improved	Very Much Improved	Very Much Improved	N/A
	FJ	Moderately Ill	N/A	N/A	N/A	N/A
	WJ	Markedly Ill	Minimally Improved	Minimally Improved	Very Much Improved	Very Much Improved
	JY	Markedly Ill	Minimally Improved	No Change	Minimally Improved	No Change

Discussion

Summary of the Patients

In sum, above we have reviewed the course of treatment for four individual patients with Parkinson's disease and accompanying depression who were assisted in treatment. These include two responders to the treatment, and two nonresponders. Before comparing these cases with regard to the factors most relevant to treatment outcome, it is useful to briefly remind the reader of the backgrounds of the four clients by quoting from the above sections describing their identifying information, in the order in which the clients' cases were presented above.

GM, a responder. "GM, a 70-year old, married, domiciled, retired, Caucasian woman living in Central New Jersey who had been diagnosed with PD 9 years prior to intake (2006),

...[was living with] her husband and caretaker, JM, a 69-year old, Caucasian, retired male. ... GM and JM had known each other for 45 years and reported no significant marital discord. GM and JM had one daughter who was married and living in Hawaii. GM and JM reported a very close relationship with their daughter throughout their lives, and GM stated that she spoke with her daughter over the phone on a daily basis.”

FJ, a nonresponder. “FJ presented for treatment as a 42-year old, divorced, employed, Caucasian man living in Central New Jersey who had been diagnosed with PD 6 months prior to intake (2014). ... At the time of intake, FJ was employed as a sales representative, and FJ reported that he had worked in this capacity for most of his professional career. FJ reported intermittent contact with his mother [who was his caretaker], but stated that he did not have close relationships with the rest of his family of origin. FJ had a 12-year old son with his recent ex-wife. His ex-wife had primary custody of the child and lived within driving distance. “

WJ, a responder. “WJ presented for treatment as a 67-year old, married, domiciled, retired, Caucasian, Latino man living in Central New Jersey who had been diagnosed with PD 11 years prior to intake (2004). ... WJ had completed a 4-year undergraduate degree, and worked as a federal investigator for much of his career. ... WJ’s caregiver for the study, his wife YJ, was a 68-year old, Korean, retired female domiciled with WJ. YJ had been diagnosed with bipolar II disorder, which she described as “stable.” ... WJ and YJ had known each other for 45 years, and reported that their relationship had been tumultuous in the past.”

JY, a nonresponder. “JY presented for treatment as a 73-year old, married, domiciled, retired, Chinese-American man living in Western New York who had been diagnosed with PD 6 years prior to intake (2010). JY had worked as an engineer for about 30 years, but had retired several years ago. ... JY’s caregiver for the study, his wife KY, was a 73-year old, Asian-

American, retired female living with JY. ... JY and KY had known each other for 48 years, and reported no significant marital discord. JY and KY had one daughter who was married and lived in the Northeastern United States with her husband. JY and KY reported a close relationship with their daughter, but stated that it had been harder for them to see her since she moved away from Western New York.”

Factors Contributing to Treatment Outcome

In reviewing the four cases described above, several factors were identified that I believe contributed significantly to treatment outcome in each case: a) the match between the worldview of the patient and that of the treatment program, b) the patient's cognitive functioning, c) caregiver involvement, and d) adherence to homework assignments.

Patients' worldviews.

Each of the four patients brought to treatment a worldview influenced by a host of factors, and the degree to which their worldviews matched the worldview represented by the program varied greatly. I hypothesize that the ‘goodness of fit’ between the worldview of each patient and the program imposed constraints and opened up opportunities in each treatment, and ultimately impacted treatment success.

Of the four patients whose treatments are profiled in this work, GM's worldview was the most amenable to that of the TH-CBT program. The clarity and structure of the CBT therapeutic approach fit well with GM's concrete cognitive style, and unlike FJ, GM had fully accepted her diagnosis, and was oriented towards active coping throughout our treatment. I believe that the good fit between GM's worldview and that of the GSH-dPD program was an important

precondition for her outstanding homework compliance and engagement throughout treatment, and ultimately, her positive treatment response.

I propose that FJ's worldview at the outset of treatment was profoundly colored by the recency of his diagnosis and the early onset of the disease. In the terms of the Motivational Interviewing treatment's 'Stages of Change,' FJ could be said to have occupied the "Precontemplation" stage, characterized by resistance to change, and doubts about the benefits and feasibility of change, with change in this case entailing acceptance of his PD diagnosis and commitment to cope with the illness as effectively as possible (Miller & Tonigan, 1996). If FJ's PD diagnosis is conceived as a loss of a former self to be mourned, FJ could be conceptualized as occupying the "Anger" stage of Elizabeth Kubler-Ross's 'Stages of Grief,' characterized by anger about and denial of the loss (Edlich & Kübler-Ross, 1992). In either case, FJ perspective was in extreme opposition to the change-oriented perspective of the GSH-dPD program, which was predicated on an acceptance of the PD diagnosis and related psychiatric symptoms, and a commitment to working on mitigating these symptoms. I believe this mismatch significantly undermined FJ's engagement in treatment and working alliance, and ultimately led FJ to discontinue his participation in the program. Although I made some concessions to FJ's worldview, in retrospect, I believe the outcome of treatment may have been better if I had made a more significant adjustment of the program in order to accommodate FJ's perspective on his situation. Such an adjustment might have involved either a) delaying FJ's initiation of treatment until assessment indicated his motivation for change had increased, b) prefacing the GSH-dPD treatment with another intervention designed to prepare FJ to engage in a change-oriented treatment, e.g. Motivational Interviewing, or c) altering the GSH-dPD treatment protocol in order

to make it more conducive to the patient's worldview, e.g. creating space in the protocol for me to empathize with and validate FJ's anger and difficulty accepting his diagnosis.

The degree of fit between WJ's worldview and the worldview of the TH-CBT program was salient in two ways. First, my experience of WJ was that he found the TH-CBT program material to be dry, stuffy, and over-reliant on rationality. Over the course of our treatment, I came to believe that his tangents focused on the unconscious, mysterious and the occult, which at first seemed like non sequiturs, were in fact a means of expressing to me the discord between his way of seeing the world and the perspective offered by the program. As the evidence supporting this hypothesis grew, I began to experiment with managing these tangents by engaging WJ with program content on his own terms, rather than asking WJ to adapt to the style of presentation used in the modules. Ultimately, I believe that framing program concepts in language that was more consistent with WJ's worldview helped these concepts come to life for him, and helped him benefit from the program to the extent that he did. In support of this idea, WJ showed his greatest improvement at the end of the program when I began to find metaphors to help make cognitive restructuring more palatable to him.

As discussed previously, I hypothesize that JY's collectivist worldview led him to hold firmly to a set of beliefs about the meaning of "usefulness" that led him to view himself as "useless," and caused him significant distress. From my perspective, and the perspective of the TH-CBT program, this belief constituted distorted thinking, but the importance of these beliefs within JY's worldview made it difficult to restructure his perception of himself by offering evidence that his criteria for "usefulness" were unrealistic. As a result, I shifted my restructuring approach and focused on the costs and benefits of maintaining his belief that he was "useless." I hypothesize that the moderate success of this approach was mediated by the same aspect of JY's

collectivist worldview that had led to the negative thought in the first place, namely, the importance placed on the individual's impact on the community. JY's perceived uselessness was so distressing to him because it violated the collectivist value of contributing positively to the common good, and he drew motivation to restructure his thoughts because he did not want his low mood to detract from the common good of his family. Although JY did report greater success in cognitive restructuring as a result of his awareness of the "cost" of his low mood to family members and others, this development occurred at the end of JY's treatment, and I did not have a chance to fully assess the impact this development had on JY's mood. His 6-month follow-up evaluation indicated a return to pre-treatment symptom levels, and it is possible that the power of JY's perception of himself as "useless" outstripped his restructuring capacity. In addition, at the exit interview, JY reported that he felt his physical functioning had deteriorated significantly since the end of treatment, and it is possible that this process, in interaction with his collectivist worldview, contributed to the increase in his depressive symptoms.

Patients' cognitive functioning.

I hypothesize that the cognitive functioning of the four patients discussed above also had a significant impact on treatment outcome.

Although not clearly indicated by her MOCA score of 26, I experienced GM's cognitive functioning to be relatively poor, particularly in the domains of abstract thinking and memory. She generally struggled to recall information from previous sessions, and had great difficulty generalizing from a concrete example to the underlying concept (e.g. when discussing cognitive distortions). The fact that GM's mood improved substantially after she increased her activity engagement, and that we were able to restructure her negative beliefs through behavioral

experiments, made her difficulty with more complex cognitive restructuring concepts less important to her overall treatment outcome. However, had she had a less supportive caregiver, or more difficulty finding rewarding or meaningful activities in which to engage, her cognitive deficits likely would have had a serious negative impact on the success of our treatment.

I do not believe FJ's cognitive functioning had a significant impact on the outcome of his treatment. His cognitive functioning was assessed as slightly below normal (MOCA score = 25), but I experienced him as one of the more cognitively intact PD patients I treated, and I never felt that cognitive deficits played a role in the difficulties of our treatment. If anything, one might argue that FJ's relative cognitive strength made it easier for him to view program concepts as overly simplistic or childish, but I believe his attitude about the program had more to do with his emotional state than his cognitive capacities.

WJ exhibited relatively strong cognitive functioning, demonstrating good short and long-term memory, and the ability to retain, generalize and apply abstract concepts. While many PD patients struggle with abstract thinking, WJ's strength in this area became an advantage in treatment once we were able to find a way to harness it by developing potent metaphors to help WJ relate to program concepts. In addition, while it took WJ some time to accept the fundamental premises of the treatment and consistently comply with homework assignments, once he did, his superior cognitive abilities allowed him to absorb and put into practice a range of program concepts quickly. Without WJ's cognitive strength, it might have been more important to increase his caregiver's involvement in treatment, which I believe would have presented problems similar to those I encountered in JY's case, since when YJ was present early in treatment, she was frequently volatile and highly critical of WJ.

JY's cognitive deficits in the areas of executive functioning, abstract thinking and memory were a major barrier to treatment success, and maximizing his benefit from treatment required a number of modifications to my therapeutic approach, including increasing my focus on KY's involvement in treatment, focusing on less complex cognitive restructuring interventions, trying to take advantage of concepts JY had already internalized whenever possible (e.g. 'cost/benefit analysis'), and spending more time on the concepts we did cover in order to maximize JY's retention. Ultimately, I believe JY's cognitive deficits played a significant role in his non-response to treatment. It is possible that extending treatment, or providing more frequent and/or longer-term booster sessions following the completion of the program modules, might be indicated to maximize the benefit for patients with JY's degree of cognitive impairment. In addition, in light of KY's involvement in JY's treatment and his significant cognitive deficits, and the positive correlation between caregiver involvement and treatment outcome (Dobkin et al., 2012), it would be useful for future research efforts in the PD population to examine the degree to which caregiver involvement can mitigate the effects of patients' cognitive deficits on treatment outcome.

Caregiver involvement.

The degree and quality of caregiver involvement was also identified as an important factor in treatment success in the cases presented above.

GM's caregiver, JM, was highly involved in her care, participated in all of our treatment sessions, and read the modules along with GM throughout the program. In addition, by all indications, he treated GM with great kindness, patience, respect, and generosity, and was able to help her articulate her thoughts and provide important bits of context during our sessions. GM

reported a very strong and loving relationship with JM, and showed respect and gratitude towards him during our sessions. They managed their disagreements in a respectful, validating way. I believe the strength of their relationship, and the insight and investment JM brought to the treatment, contributed enormously to GM's treatment success. However, JM's overprotectiveness also posed an initial barrier to treatment, because in his effort to safeguard GM's welfare, he had reinforced her very low activity engagement, which I believed was contributing to her low mood. Luckily, JM was very open to exploring and adjusting his interpersonal dynamics with GM, and did a great job supporting GM's behavioral activation, which I see as the key to her positive response to treatment. Thus, GM's contribution to treatment was almost entirely positive, and given his important role in maintaining her disengagement, I think it would have been difficult to make significant progress in treatment without his involvement.

FJ was the only patient profiled in this work whose assigned caregiver (his mother) played no role in treatment aside from completing assessment materials. At intake, FJ stated that he did not have a particularly close relationship with his mother, but that she was the best candidate to serve as assigned caregiver for his treatment, while making it clear that he did not want her to participate in sessions, read the program modules along with him, or have any substantial role in his study participation. I see FJ's attitude of rejecting help as born out of FJ's feelings of shame and denial regarding his PD diagnosis, and exacerbated by the relatively distant relationship he had with his mother. It is possible that the participation of a caregiver, particularly someone closer to FJ, might have helped him overcome his denial and resistance, and engage in treatment more fully.

WJ's caregiver, YJ, was relatively uninvolved in his treatment after session 5, and overall, I think YJ's minimal participation benefited WJ's treatment. WJ's cognitive skills were quite strong, while YJ's seemed less so, and YJ showed minimal interest in and grasp of the program modules. YJ could not, and did not need to, provide the same support to WJ that KY could for JY. In addition, like KY, YJ demonstrated a penchant for harsh criticism of WJ, and was more volatile and difficult to redirect than KY. Additionally, YJ had a strong accent, and I found it very difficult to understand her speech. She may have had a difficult time understanding me as well, because I often felt that her responses in our conversation indicated miscomprehension. I do think that YJ offered useful insights into YJ's thoughts and behavior at times, but for the reasons listed above, I think it was clinically indicated for YJ to play a small role in WJ's treatment, and I speculate that his treatment might not have been as successful had she been involved, although it seems equally possible that treatment would have been just as successful had YJ been more involved, because I think WJ had the cognitive and functional capacities to benefit from the treatment without much support, once the mismatch in his worldview and that of the program had been overcome.

Concerning JY and his caregiver KY, KY's contribution to JY's treatment was more complicated. Due to KY's significant cognitive deficits, I believe it was very important that JY was present for most of our sessions and read the modules faithfully, since she became quite familiar with program concepts, and could help JY apply them. However, KY was very frustrated with what she perceived as JY's irrationality and laziness, and the critical manner in which she delivered feedback to JY at least partially negated her positive contribution to treatment, as it seemed that both in and outside session, the hostility behind her communication made it hard for JY to take in her recommendations, and he often shut down or engaged her in an

argument. I believe that my efforts to help JY and KY develop skills to improve their interactions were partially effective based on my discussion with them in the second booster session and exit interview. However, since I spent very little time helping JY and KY develop these new skills, I hypothesize that their adversarial communication patterns continued after treatment concluded, and contributed to JY's poor response to treatment.

Homework adherence.

Lastly, I believe that patients' degree of homework adherence, both in reading the program modules and putting program concepts into practice, played a meaningful role in the treatment outcomes of the patients described above.

GM and JM were highly compliant with module reading and other homework assignments throughout treatment. In part, I think this relates to the fit between the nature of the GSH-dPD treatment and their worldview and outlook at the beginning of treatment: they were fully committed to treatment and appreciated the structured, problem-solving nature of the module material. In addition, unlike FJ, they had relatively few psychosocial stressors, and as retirees, had ample time to devote to reading the modules and practice program skills. Based on my treatment notes, it was extremely rare for GM not to read the assigned module material or attempt to complete a homework assignment. In addition, JM read the modules with GM, which I strongly believe facilitated GM's homework adherence and overall engagement with the program. In sum, I believe that strong homework adherence was an important factor in GM's positive response to treatment.

In contrast, FJ's homework adherence was quite poor. He reported not reading, or making cursory efforts to read, all modules aside from Module 4, and did not pursue non-reading

homework assignments aside from making several entries in the Thought Log. In addition, FJ made clear that he did not have time for activity scheduling, and showed little interest in the cognitive restructuring skills we discussed, making it difficult to find appropriate homework to assign. At the exit interview, FJ acknowledged his resistance to homework assignments during the program, stating that he found the simplicity of the techniques off-putting. However, he also said he had made some efforts to identify and challenge negative automatic thoughts on his own during the course of the program, and found the process surprisingly helpful. He had not shared these efforts with me during treatment, and I suspect that doing so would have been taking a step in the direction of acceptance and commitment to change that he was not yet prepared to take.

WJ's homework adherence was fair for the first two-thirds of the program: read through the modules more than half the time, usually made an attempt at skills practice assignments (e.g. making Thought Log entries or doing cognitive restructuring practice) more often than not, and did a good job with activity scheduling. However, as discussed above, early in treatment, he had a difficult time relating to some of the program concepts, and did not seem fully engaged with the material until approximately sessions 8. However, once he did become engaged, he practiced cognitive restructuring skills (e.g. thought stopping) diligently, and reported significant benefit from them. While WJ's scores on quantitative measures of depressive severity did not drop in correspondence with his increase in homework adherence late in treatment, my exit interview with WJ suggested that he used program skills after the end of treatment more often than most patients I spoke with, and I hypothesize that this ongoing adherence to program principles at least in part explains the fact that WJ maintained his treatment gains at the 6-month follow-up evaluation.

JY's adherence to module reading and skills practice assignments was quite poor, as he frequently forgot to do homework assignments or misplaced e-mails detailing these assignments, and KY often complained that he procrastinated on program tasks. It was also difficult to tell how much of a given module he had read or the degree to which he had practiced a skill, because he retained so little of the information in the modules, and often misplaced homework assignments that he claimed to have completed. By the middle of our treatment, it had become clear to me that the majority of JY's engagement with program skills would happen within our sessions. I do believe that JY's poor homework adherence contributed to his nonresponse to treatment, but I also think his cognitive deficits were severe enough that it would have been hard for him to benefit significantly from additional practice without ongoing support from KY. The difficulties in their relationship made it difficult for KY to support JY in this way, but she did report an improvement in her ability to provide this support through the use of some of the interpersonal skills we worked on, and JY did report using the 'cost/benefit analysis' restructuring technique more effectively at the end of treatment. JY's 6-month follow-up scores indicate that he did not maintain the modest gains he made during treatment, and I hypothesize that poor homework adherence during the program and insufficient skill use after the program contributed to these results, although clearly, his cognitive deficits and contentious relationship with KY were also major contributors.

Conclusion

After considering the lessons I learned in the course of the four treatments presented in this work, I believe the most important common factor underlying the treatment successes and failures I experienced is the degree to which I was able to flexibly adapt the treatment to the

needs of the clinical situation. In the case of GM, I recognized and addressed the role GM's caregiver was playing in reinforcing her disengagement from pleasurable activities; and in WJ's case, I was ultimately able to present the program materials in a way that he could relate to. On the other hand, I was unable to find a way to modify the treatment protocol to meet FJ's need for support and validation, and I struggled to tailor treatment to sufficiently mitigate the negative impact of JY's cognitive and functional impairments and his combative relationship with KY.

References

- Alloy, L. B., & Abramson, L. Y. (1999). The Temple—Wisconsin Cognitive Vulnerability to depression project: conceptual background, design, and methods. *Journal of Cognitive Psychotherapy*, 13(3), 227-262.
- Aarsland, D., Bronnick, K., Larsen, J.P., Tysnes, O.B., Alves, G. (2009). Cognitive impairment in incident, untreated Parkinson disease: The Norwegian ParkWest study. *Neurology*, 72, 1121–1126.
- Baker, T. B., McFall, R. M., & Shoham, V. (2008). Current status and future prospects of clinical psychology toward a scientifically principled approach to mental and behavioral health care. *Psychological Science in the Public Interest*, 9(2), 67-103.
- Barone, P., Poewe, W., Albrecht, S., Debieuvre, C., Massey, D., Rascol, O., Tolosa, E. & Weintraub, D. (2010). Pramipexole for the treatment of depressive symptoms in patients with Parkinson's disease: a randomised, double-blind, placebo-controlled trial. *The Lancet Neurology*, 9(6), 573-580.
- Bastien, C. H., Vallières, A., & Morin, C. M. (2001). Validation of the Insomnia Severity Index as an outcome measure for insomnia research. *Sleep Medicine*, 2(4), 297-307.
- Beck, A. T. (1967). *Depression: Causes and treatment*. Philadelphia: University of Pennsylvania Press.
- Beck, A.T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961) An inventory for measuring depression. *Archives of General Psychiatry*, 4(6), 561-571.

Benedict, R. H., Schretlen, D., Groninger, L., & Brandt, J. (1998). Hopkins Verbal Learning Test–Revised: Normative data and analysis of inter-form and test-retest reliability. *The Clinical Neuropsychologist*, 12(1), 43-55.

Bowen, F.P., Kamienny, R.S., Burns, M.M., Yahr, M. (1975). Parkinsonism: effects of levodopa treatment on concept formation. *Neurology*, 25(8), 701–704.

Breuer, J., Freud, S., Strachey, J., & Bernays, A. F. (2000). *Studies on hysteria*. Basic Books.

Bromley, D. B. (1986). *The case-study method in psychology and related disciplines*. John Wiley & Sons.

Caviness, J.N., Driver-Dunckley, E., Connor, D.J., Sabbagh, M.N., Hentz, J.G., Noble, B., Evidente, V.G.H., Shill, H.A., & Adler, C.H. (2007). Defining mild cognitive impairment in Parkinson's disease. *Movement Disorders*, 22(9), 1272–1277.

Chagas, M. H. N., Moriyama, T. S., Felício, A. C., Sosa, A. L., Bressan, R. A., & Ferri, C. P. (2014). Depression increases in patients with Parkinson's disease according to the increasing severity of the cognitive impairment. *Arquivos de Neuropsiquiatria*, 72(6), 426-429.

Clyburn, L. D., Stones, M. J., Hadjistavropoulos, T., & Tuokko, H. (2000). Predicting caregiver burden and depression in Alzheimer's disease. *Journals Of Gerontology Series B*, 55(1), S2-S13.

Cools, R., Barker, R.A., Sahakian, B.J., Robbins, T.W. (2003). L-Dopa medication remediates cognitive inflexibility, but increases impulsivity in patients with Parkinson's disease. *Neuropsychologia*, 41(11) 1431–1441.

Cousins, R., Davies, A. D., Turnbull, C. J., & Playfer, J. R. (2002). Assessing caregiving distress: A conceptual analysis and a brief scale. *British Journal of Clinical Psychology*, 41(4), 387-403.

Cryer, L., Shannon, S. B., Van Amsterdam, M., & Leff, B. (2012). Costs for 'hospital at home' patients were 19 percent lower, with equal or better outcomes compared to similar inpatients. *Health Affairs*, 31(6), 1237-1243.

Cuijpers, P., Donker, T., van Straten, A., Li, J., & Andersson, G. (2010). Is guided self-help as effective as face-to-face psychotherapy for depression and anxiety disorders? A systematic review and meta-analysis of comparative outcome studies. *Psychological Medicine*, 40(12), 1943-1957.

Cummings, J.L. (1992) Depression and Parkinson's disease: A review. *American Journal of Psychiatry*, 149(4), 443-454.

da Silva, T. M., Munhoz, R. P., Alvarez, C., Naliwaiko, K., Kiss, Á., Andreatini, R., & Ferraz, A. C. (2008). Depression in Parkinson's disease: a double-blind, randomized, placebo-controlled pilot study of omega-3 fatty-acid supplementation. *Journal of Affective Disorders*, 111(2), 351-359.

Delis, D. C., Kaplan, E., & Kramer, J. H. (2001). *Delis-Kaplan executive function system (D-KEFS)*. Psychological Corporation.

Devos, D., Dujardin, K., Poirot, I., Moreau, C., Cottencin, O., Thomas, P., Destée, A., Bordet, R. & Defebvre, L. (2008). Comparison of desipramine and citalopram treatments for depression in

Parkinson's disease: A double-blind, randomized, placebo-controlled study. *Movement Disorders*, 23(6), 850-857.

Dissanayaka, N. N., Sellbach, A., Matheson, S., O'Sullivan, J. D., Silburn, P. A., Byrne, G. J., Marsh, R. & Mellick, G. D. (2010). Anxiety disorders in Parkinson's disease: prevalence and risk factors. *Movement Disorders*, 25(7), 838-845.

Dobkin, R. D., Menza, M., Allen, L. A., Gara, M. A., Mark, M. H., Tiu, J., Bienfait, K.L. & Friedman, J. (2011). Cognitive-behavioral therapy for depression in Parkinson's disease: a randomized, controlled trial. *American Journal of Psychiatry*, 168(10), 1066-1074.

Dobkin, R. D., Menza, M., Allen, L. A., Tiu, J., Friedman, J., Bienfait, K. L., Gara, M.A. & Mark, M. H. (2011). Telephone-based cognitive-behavioral therapy for depression in Parkinson disease. *Journal of Geriatric Psychiatry and Neurology*, 24(4), 206-214.

Dobkin, R. D., Rubino, J. T., Allen, L. A., Friedman, J., Gara, M. A., Mark, M. H., & Menza, M. (2012). Predictors of treatment response to cognitive-behavioral therapy for depression in Parkinson's disease. *Journal of Consulting and Clinical Psychology*, 80(4), 694.

Dobkin, R. D., Rubino, J. T., Friedman, J., Allen, L. A., Gara, M. A., & Menza, M. (2013). Barriers to mental health care utilization in Parkinson's disease. *Journal of Geriatric Psychiatry and Neurology*, 26(2), 105-116.

Dobkin, R. D., Tröster, A. I., Rubino, J. T., Allen, L. A., Gara, M. A., Mark, M. H., & Menza, M. (2014). Neuropsychological outcomes after psychosocial intervention for depression in Parkinson's Disease. *The Journal of neuropsychiatry and clinical neurosciences*, 26(1), 57-63.

Dobkin, R. D. (2014). The relationship between telephone-administered cognitive-behavioral therapy for depression and neuropsychological functioning in Parkinson's disease. *The Journal of Neuropsychiatry and Clinical Neurosciences*, 26(2), E10-E11.

Dorsey, E., Deuel, L. M., Voss, T. S., Finnigan, K., George, B. P., Eason, S., Miller, D., Reminick, J.I., Appler, A., Polanowicz, J., Viti, L., Smith, S., Joseph, A. & Biglan, K. M. (2010). Increasing access to specialty care: a pilot, randomized controlled trial of telemedicine for Parkinson's disease. *Movement Disorders*, 25(11), 1652-1659.

Edlich, R. F., & Kübler-Ross, E. (1992). On death and dying in the emergency department. *The Journal of Emergency Medicine*, 10(2), 225-229.

Farabaugh, A., Locascio, J. J., Yap, L., Growdon, J., Fava, M., Crawford, C., Matthews, J., McCutchen, J., Buchin, J., Pava, J., & Alpert, J. E. (2010). Cognitive–Behavioral Therapy for Patients With Parkinson's Disease and Comorbid Major Depressive Disorder. *Psychosomatics*, 51(2), 124-129.

Farrand, P., & Woodford, J. (2013). Impact of support on the effectiveness of written cognitive behavioural self-help: a systematic review and meta-analysis of randomised controlled trials. *Clinical Psychology Review*, 33(1), 182-195.

Findley, L., Eichhorn, T., Janca A., Kazenwadel, J., Baker, M., Currie-Gnjesda, D., Koller, W., Lieberman, A., Mizuno, Y., Rajput, A., Stocchi, F., Tolosa, E., Roy, S. (2002) Factors impacting on quality of life in Parkinson's disease: results from an international survey. *Movement Disorders*, 17(1), 60–67.

Fishman, D. B. (1999). *The case for pragmatic psychology*. New York: NYU Press.

Fishman, D. B. (2005). Editor's introduction to PCSP—From single case to database: A new method for enhancing psychotherapy practice. *Pragmatic Case Studies in Psychotherapy*, 1(1), 1-50.

Fishman, D.B., Messer, S.B., Edwards, D.J.A., & Datillio, F.M. (2017). *Case studies within psychotherapy trials: Integrating qualitative and quantitative methods*. New York: Oxford University Press.

Floyd, M., Scogin, F., McKendree-Smith, N. L., Floyd, D. L., & Rokke, P. D. (2004). Cognitive therapy for depression: A comparison of individual psychotherapy and bibliotherapy for depressed older adults. *Behavior Modification*, 28(2), 297-318.

Folstein, M. F., Folstein, S. E., & McHugh, P. R. (1975). "Mini-mental state": a practical method for grading the cognitive state of patients for the clinician. *Journal of psychiatric research*, 12(3), 189-198.

Foltynie, T., Brayne, C.E., Robbins, T.W., Barker, R.A. (2004). The cognitive ability of an incident cohort of Parkinson's patients in the UK: The CamPaIGN study. *Brain*, 127(3), 550–560.

Forsaa, E.B., Larsen, J.P., Wentzel-Larsen, T., Herlofson, K., Alves, G. (2008). Predictors and course of health-related quality of life in Parkinson's disease. *Movement Disorders*, 23(10), 1420-1427.

Gauthier, S., Reisberg, B., Zaudig, M., Petersen, R. C., Ritchie, K., Broich, K., Belleville, S., Brodaty, H., Bennett, D., Chertkow, H., Cummings, J. L., de Leon, M., Feldman, H., Ganguli, M., Hampel, H., Scheltens, P., Tierney, M.C., Whitehouse, P. & Winblad, B. (2006). Mild cognitive impairment. *The Lancet*, 367(9518), 1262-1270.

Glueckauf, R. L., & Ketterson, T. U. (2004). Telehealth Interventions for Individuals With Chronic Illness: Research Review and Implications for Practice. *Professional Psychology: Research and Practice*, 35(6), 615.

Glueckauf, R. L., Davis, W. S., Willis, F., Sharma, D., Gustafson, D. J., Hayes, J., Stutzman, M., Proctor, J., Kazmer, M.M., Murray, L., Shipman, J., McIntyre, V., Wesley, L., Schettini, G., Xu, J., Parfitt, F., Graff-Radford, N., Baxter, C., Burnett, K., Noël, L., Haire, K. & Springer, J. (2012). Telephone-based, cognitive-behavioral therapy for African American dementia caregivers with depression: Initial findings. *Rehabilitation Psychology*, 57(2), 124.

Güler, N. F., & Übeyli, E. D. (2002). Theory and applications of telemedicine. *Journal of Medical Systems*, 26(3), 199-220.

Guy, W. (1976). Clinical global impression scale. *The ECDEU Assessment Manual for Psychopharmacology-Revised Volume DHEW*, 76(338), 218-222.

Hamilton, M. (1960). A rating scale for depression. *Journal of Neurology, Neurosurgery, and Psychiatry*, 23(1), 56.

Hamilton, M. A. X. (1959). The assessment of anxiety states by rating. *British Journal of Medical Psychology*, 32(1), 50-55.

Happe, S., Berger, K., & FAQT Study Investigators. (2002). The association between caregiver burden and sleep disturbances in partners of patients with Parkinson's disease. *Age and Ageing*, 31(5), 349-354.

Hartelius, L., and Svensson, P. (1994). Speech and swallowing symptoms associated with Parkinson's disease and multiple sclerosis: A survey. *Folia Phoniatrica*, 46(1), 9–17.

Himelhoch, S., Mohr, D., Maxfield, J., Clayton, S., Weber, E., Medoff, D., & Dixon, L. (2011). Feasibility of telephone-based cognitive behavioral therapy targeting major depression among urban dwelling African-American people with co-occurring HIV. *Psychology, Health & Medicine*, 16(2), 156-165.

Hirtz, D., Thurman, D. J., Gwinn-Hardy, K., Mohamed, M., Chaudhuri, A. R., & Zalutsky, R. (2007). How common are the “common” neurologic disorders? *Neurology*, 68(5), 326-337.

Hollon, S. D., & Beck, A. T. (1994). Cognitive and cognitive-behavioral therapies. In A. E. Bergin & S.L. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (pp. 428—466). New York: Wiley.

Illes, J., Metter, E. J., Hanson, W. R., & Iritani, S. (1988). Language production in Parkinson's disease: Acoustic and linguistic considerations. *Brain and Language*, 33(1), 146-160.

Ishihara, L., & Brayne, C. (2006). A systematic review of depression and mental illness preceding Parkinson's disease. *Acta Neurologica Scandinavica*, 113(4), 211-220.

Janvin, C.C., Larsen, J.P., Aarsland, D., Hugdahl, K. (2006). Subtypes of mild cognitive impairment in Parkinson's disease: progression to dementia. *Movement Disorders*, 21(9), 1343–

1349.

Kehagia, A.A., Cools, R., Barker, R.A., Robbins, T.W. (2009). Switching between abstract rules reflects disease severity but not dopaminergic status in Parkinson's disease. *Neuropsychologia*, 47(4), 1117–1127.

Kendall, P. C., & Kriss, M. R. (1983). Cognitive-behavioral interventions. In: C. E. Walker, ed. *The handbook of clinical psychology: theory, research and practice*, pp. 770–819. Homewood, IL: Dow Jones-Irwin.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of general psychiatry*, 62(6), 593-602.

Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Chatterji, S., Lee, S., Ormel, J., Üstün, T.B. & Wang, P. S. (2009). The global burden of mental disorders: an update from the WHO World Mental Health (WMH) surveys. *Epidemiologia e psichiatria sociale*, 18(1), 23-33.

Lewinsohn, P.M. & Graf, M. (1973). Pleasant activities and depression. *Journal of Consulting and Clinical Psychology*, 41(2), 261-268.

Lewinsohn, P.M., & Libet, J. (1972). Pleasant events, activity schedules, and depression. *Journal of Abnormal Psychology*, 79, 291-295.

Linehan, M. (1993). Cognitive behavioral therapy for borderline personality disorder. New York: Guilford.

Liss, H. J., Glueckauf, R. L., & Ecklund-Johnson, E. P. (2002). Research on telehealth and chronic medical conditions: Critical review, key issues, and future directions. *Rehabilitation Psychology, 47*(1), 8.

Logemann, J. A., Fisher, H. B., Boshes, B., & Blonsky, E. R. (1978). Frequency and cooccurrence of vocal tract dysfunctions in the speech of a large sample of Parkinson patients. *Journal of Speech and Hearing Disorders, 43*(1), 47-57.

Longacre, M. L., Wong, Y. N., & Fang, C. Y. (2013). Caregiver psychological health and hospitalization characteristics of older adult care recipients: an integrative review of US studies. *Research in Gerontological Nursing, 7*(3), 139-147.

Marsh, L. (2010). Neuropsychiatric issues in advancing PD: clinical spectrum and resulting QOL implications. *Movement Disorders, 25*, S570-S570.

Marsh, L., McDonald, W. M., Cummings, J., & Ravina, B. (2006). Provisional diagnostic criteria for depression in Parkinson's disease: report of an NINDS/NIMH Work Group. *Movement Disorders, 21*(2), 148-158.

Martínez-Martín, P., Benito-León, J., Alonso, F., Catalán, M. J., Pondal, M., Zamarbide, I., Tobias, A. & De Pedro, J. (2005). Quality of life of caregivers in Parkinson's disease. *Quality of Life Research, 14*(2), 463-472.

Martinez-Martin, P., Forjaz, M.J., Frades-Payo, B., Rusiñol, A.B., Fernández-García, J.M., Benito-León, J., Arillo, V.C. , Barberá, M.A., Sordo, M.P., Catalán, M.J. (2007). Caregiver burden in Parkinson's disease. *Movement Disorders, 22*(7), 924–931.

McKendree-Smith, N. L., Floyd, M., & Scogin, F. R. (2003). Self-administered treatments for depression: a review. *Journal of clinical psychology*, 59(3), 275-288.

Meehl, P. E. (1954). Clinical versus statistical prediction: A theoretical analysis and a review of the evidence.

Menza, M.A., Robertson-Hoffmann, D.E., Bonapace, A.S. (1993) Parkinson's disease and anxiety: comorbidity with depression. *Biological Psychiatry*, 34, 465-470.

Menza, M., Dobkin, R. D., Marin, H., Mark, M. H., Gara, M., Buyske, S., Bienfait, K. & Dicke, A. (2009). A controlled trial of antidepressants in patients with Parkinson disease and depression. *Neurology*, 72(10), 886-892.

Minuchin, Salvatore. (1974). Families and family therapy. Harvard University Press.

Mohr, D. C., Likosky, W., Bertagnolli, A., Goodkin, D. E., Van Der Wende, J., Dwyer, P., & Dick, L. P. (2000). Telephone-administered cognitive-behavioral therapy for the treatment of depressive symptoms in multiple sclerosis. *Journal of Consulting and Clinical Psychology*, 68(2), 356.

Mohr, D.C., Hart, S.L., Julian, L., Catledge, C., Honos-Webb, L., Vella, L., & Tasch, E. T. (2005). Telephone-administered psychotherapy for depression. *Archives of General Psychiatry*, 62(9), 1007-1014.

Mohr, D. C., Hart, S., & Vella, L. (2007). Reduction in disability in a randomized controlled trial of telephone-administered cognitive-behavioral therapy. *Health Psychology*, 26(5), 554.

Mohr, D. C., Vella, L., Hart, S., Heckman, T., & Simon, G. (2008). The effect of telephone-administered psychotherapy on symptoms of depression and attrition: A meta-analysis. *Clinical Psychology: Science and Practice*, 15(3), 243-253.

Mohr, D. C., Ho, J., Duffecy, J., Reifler, D., Sokol, L., Burns, M. N., Ling, J. & Siddique, J. (2012). Effect of telephone-administered vs. face-to-face cognitive behavioral therapy on adherence to therapy and depression outcomes among primary care patients: a randomized trial. *Journal of the American Medical Association*, 307(21), 2278-2285.

Morris, R.G., Downes, J.J., Sahakian, B.J., Evenden, J.L., Heald, A., Robbins, T.W. (1988). Planning and spatial working memory in Parkinson's disease. *Journal of Neurology, Neurosurgery and Psychiatry*, 51(6), 757-66.

Mowrer, O. H. (1947). On the dual nature of learning—a reinterpretation of conditioning and problem solving. *Harvard Educational Review*, 17, 102-148.

Nasreddine, Z. S., Phillips, N. A., Bédirian, V., Charbonneau, S., Whitehead, V., Collin, I., Cummings, J.L. & Chertkow, H. (2005). The Montreal Cognitive Assessment, MoCA: a brief screening tool for mild cognitive impairment. *Journal of the American Geriatrics Society*, 53(4), 695-699.

National Parkinson's Foundation. (2017). *Parkinson's Statistics*. Retrieved from http://www.pdf.org/parkinson_statistics.

Newman, M. G., Szkodny, L. E., Llera, S. J., & Przeworski, A. (2011). A review of technology-assisted self-help and minimal contact therapies for anxiety and depression: is human contact necessary for therapeutic efficacy?. *Clinical psychology review*, 31(1), 89-103.

Nuti, A., Ceravolo, R., Piccinni, A., Dell'Agnello, G., Bellini, G., Gambaccini, G., & Bonuccelli, U. (2004). Psychiatric comorbidity in a population of Parkinson's disease patients. *European Journal of Neurology*, 11(5), 315-320.

Okai, D., Askey-Jones, S., Samuel, M., O'Sullivan, S. S., Chaudhuri, K. R., Martin, A., Mach, J., Brown, R.G. & David, A. S. (2013). Trial of CBT for impulse control behaviors affecting Parkinson patients and their caregivers. *Neurology*, 80(9), 792-799.

Owen, A.M., James, M., Leigh, P.N., Summers, B.A., Marsden, C.D., Quinn, N.A., Lange, K.W., Robbins, T.W.. (1992). Fronto-striatal cognitive deficits at different stages of Parkinson's disease, *Brain*, 115(6), 1727-1751.

Pachana, N. A., Egan, S. J., Laidlaw, K., Dissanayaka, N., Byrne, G. J., Brockman, S., Marsh, R. & Starkstein, S. (2013). Clinical issues in the treatment of anxiety and depression in older adults with Parkinson's disease. *Movement Disorders*, 28(14), 1930-1934.

Persons, J. B. (2012). *The case formulation approach to cognitive-behavior therapy*. Guilford Press.

Persons, J. B., & Silberschatz, G. (1998). Are results of randomized controlled trials useful to psychotherapists?. *Journal of consulting and clinical psychology*, 66(1), 126.

Peterson, D. R. (1991). Connection and disconnection of research and practice in the education of professional psychologists. *American Psychologist*, 46(4), 422.

Ravina B, Camicioli R, Como P, Marsh L, Jankovic J, Weintraub D, Elm J. The impact of depressive symptoms in early Parkinson disease. *Neurology* 2007;69:342-347.

Reijnders, M.A., Ehrt, U., Weber, W.E.J., Aarsland, D., Leentjens, A.F. (2008). A systematic review of prevalence studies of depression in Parkinson's disease. *Movement Disorders*, 23(2), 183-189.

Reuther, M., Spottke, E.A., Klotsche, J. (2007). Assessing health-related quality of life in patients with Parkinson's disease in a prospective longitudinal study. *Parkinsonism and Related Disorders*, 13(2), 108-114.

Riedel, O., Heuser, I., Klotsche, J., Dodel, R., & Wittchen, H. U. (2009). Occurrence risk and structure of depression in Parkinson disease with and without dementia: results from the GEPAD Study. *Journal of Geriatric Psychiatry and Neurology*, 23(1), 27-34.

Robertson, C., & Flowers, K. A. (1990). Motor set in Parkinson's disease. *Journal of Neurology, Neurosurgery & Psychiatry*, 53(7), 583-592.

Schrag A, Jahanshahi M, Quinn N. (2000). What contributes to quality of life in patients with Parkinson's disease? *Journal of Neurology Neurosurgery and Psychiatry*, 69, 308-312.

Schrag, A., Hovris, A., Morley, D., Quinn, N., & Jahanshahi, M. (2006). Caregiver-burden in Parkinson's disease is closely associated with psychiatric symptoms, falls, and disability. *Parkinsonism & Related Disorders*, 12(1), 35-41.

Schrag, A., Barone, P., Brown, R. G., Leentjens, A. F., McDonald, W. M., Starkstein, S., Weintraub, D., Poewe, W., Rascol, O., Sampaio, C., Stebbins, G.T., & Goetz, C. G. (2007).

Depression rating scales in Parkinson's disease: critique and recommendations. *Movement Disorders*, 22(8), 1077-1092.

Serfaty, M. A., Haworth, D., Blanchard, M., Buszewicz, M., Murad, S., & King, M. (2009). Clinical effectiveness of individual cognitive behavioral therapy for depressed older people in primary care: a randomized controlled trial. *Archives of General Psychiatry*, 66(12), 1332-1340.

Simpson, J., Haines, K., Lekwuwa, G., Wardle, J., & Crawford, T. (2006). Social support and psychological outcome in people with Parkinson's disease: evidence for a specific pattern of associations. *British Journal of Clinical Psychology*, 45(4), 585-590.

Shulman, L. M., Taback, R. L., Rabinstein, A. A., & Weiner, W. J. (2002). Non-recognition of depression and other non-motor symptoms in Parkinson's disease. *Parkinsonism & Related Disorders*, 8(3), 193-197.

Spitzer, R. L., Gibbon, M., & Williams, J. B. (1998). *Structured clinical interview for DSM-IV axis I disorders: Patient edition (February 1996 final)*, SCID-I/P. Biometrics Research Department, New York State Psychiatric Institute.

Stiles-Shields C., Kwasny M.J., Cai X., Mohr D.C. (2014). Therapeutic alliance in face-to-face and telephone-administered cognitive behavioral therapy. *Journal of Consulting and Clinical Psychology*, 80(2): 349-354.

Tandberg, E., Larsen, J.P., Aarsland, D., Cummings, J.L. (1996). The occurrence of depression in Parkinson's disease. A community-based study. *Archives of Neurology*, 53(2), 175-179.

Taylor, A. E., & Saintcy, J. A. (1995). The neuropsychology of Parkinsons-disease. *Brain and Cognition*, 28(3), 281-296.

Valente, A.X., das Neves, R.P., & Oliviera, P.J. (2012). Epigenetic engineering to reverse the Parkinson's expression state. *Parkinsonism & Related Disorders*, 18(6), 717-721.

Veazey, C., Cook, K.F., Stanley, M., Lai, E.C., Kunik, M.E. (2009). Telephone-administered cognitive behavioral therapy: A case study of anxiety and depression in Parkinson's disease. *Journal of Clinical Psychology in Medical Settings*, 16(3), 243-253.

Voerman, J. S., Remerie, S., Westendorp, T., Timman, R., Busschbach, J. J., Passchier, J., & de Klerk, C. (2015). Effects of a guided Internet-delivered self-help intervention for adolescents with chronic pain. *The Journal of Pain*, 16(11), 1115-1126.

Ware Jr, J. E., & Sherbourne, C. D. (1992). The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. *Medical Care*, 473-483.

Wechsler, D. (1997). *Wechsler Memory Scale—III*. San Antonio, TX: Psychological Corporation.

Wennberg, D. E., Marr, A., Lang, L., O'Malley, S., & Bennett, G. (2010). A randomized trial of a telephone care-management strategy. *New England Journal of Medicine*, 363(13), 1245-1255.

Westen, D., Novotny, C. M., & Thompson-Brenner, H. (2004). The empirical status of empirically supported psychotherapies: assumptions, findings, and reporting in controlled clinical trials. *Psychological Bulletin*, 130(4), 631.

Williams-Gray, C.H., Foltynie, T., Brayne, C.E., Robbins, T.W., Barker, R.A. (2007). Evolution of cognitive dysfunction in an incident Parkinson's disease cohort. *Brain*, 130, 1787-98.

Wilson, G. T. (1996). Manual-based treatments: The clinical application of research findings. *Behaviour Research and Therapy*, 34(4), 295-314.

Wright, J. H., Wright, A. S., Albano, A. M., Basco, M. R., Goldsmith, L. J., Raffield, T., & Otto, M. W. (2014). Computer-assisted cognitive therapy for depression: maintaining efficacy while reducing therapist time. *American Journal of Psychiatry*, 162(6), 1158-1164.

Yang, S., Sajatovic, M., & Walter, B. L. (2012). Psychosocial interventions for depression and anxiety in Parkinson's disease. *Journal of Geriatric Psychiatry and Neurology*, 25(2), 113-121.

Young, J., & Beck, A. T. (1980). Cognitive therapy scale: Rating manual. *Unpublished manuscript*.

Zarit, S. H., Todd, P. A., & Zarit, J. M. (1986). Subjective burden of husbands and wives as caregivers: a longitudinal study. *The Gerontologist*, 26(3), 260-266.

Appendix A. Exit Interview Questions

For Patient:

- 1 What were the primary difficulties you were facing as a result of your PD prior to participating in our study? How were you coping with these difficulties?
- 2 What was it like for you to participate in this treatment?
- 3 Which parts of this treatment did you find most helpful, and why? Which parts of this treatment did you find least helpful, and why? Which skills or concepts have you continued to use after completing the treatment?
- 4 What was it like to involve [name of caregiver] in your treatment? In what ways did you feel that caregiver participation was helpful/unhelpful in treatment? In what ways could the program improve the role of the caregiver?
- 5 What was it like to participate in a treatment that was delivered over the phone?
- 6 What was your experience of completing the evaluations involved in this program?
- 7 What was your experience using the written self-help materials provided to you for the program? In what ways were these materials helpful? In what ways were they unhelpful?

- 8 What do you see as the most important positive changes resulting from your participation in the study? How did those changes occur?
- 9 What were some things that did not get better for you during the program? Do you have suggestions for how the program might have better addressed these difficulties?
- 10 What are your primary difficulties related to PD at the moment? What strategies have you tried to address these difficulties?
- 11 Were there other significant obstacles to treatment success that we have not touched on? How might the program help eliminate these treatment barriers and better capitalize on treatment facilitators in the future?

For Caregiver:

- 1 What was it like for you to participate in this treatment?
- 2 In what ways do you feel [patient's name] benefited or did not benefit from the program?
- 3 In what ways do you feel you were able to help [patient's name] benefit from the program? In what ways was it difficult for you to help [patient's name] benefit from the program?

- 4 Which parts of this treatment were you most actively involved with? Which parts of this treatment were difficult for you to engage with? Are there parts of the program that you continued to help [patient's name] use after the program was over?
- 5 In what ways do you think the program could improve the role of the caregiver?

Appendix B. Program Content Summary

- **Modules 1 & 2: Behavioral Activation**
 - Review of depression symptoms
 - Act according to goals and not feelings
 - Act as if (not depressed/anxious)
 - Schedule rewarding/meaningful activities each day
 - Daily exercise
- **Modules 2 & 3: Thought Monitoring**
 - Interpretations of events determines their impact on mood
 - Thought Log helps understand relationship situation, thoughts, and emotions
 - Catch and “press pause” on negative thoughts
 - ‘Cognitive distortions’ help recognize and categorize negative thoughts
- **Modules 4, 5 & 6 – Cognitive Restructuring**
 - Change mood by changing thinking
 - Develop more realistic, balanced, accurate appraisals of situations
 - Techniques:
 - ‘Evidence for/against’

- 'Cost/benefit analysis'
- Behavioral experiments
- What would you tell a friend?
- Focusing on the most realistic outcome
- **Modules 7 – Stress and Relaxation Training:**
 - Complete Natural Breathing
 - Guided Imagery
 - Progressive Muscle Relaxation
- **Module 8 – Worry Control**
 - Scheduling and postponing worry
 - Coping statements or positive affirmations
 - Writing
 - Problem-solving
 - Cognitive restructuring
- **Modules 8 – Sleep Hygiene & Stimulus Control**
 - Maintaining a regular bedtime/wake-time schedule
 - Establishing a bedtime/nighttime routine

- Using your bedroom for sleep and sex only
- Limiting naps
- Challenging negative thoughts that exacerbate insomnia
- **Module 9 – Simplified Restructuring**
 - Practice moving directly from your negative thought to a more rational response
- **Modules 10 – Program Review**
 - Review program goals, assess progress towards meeting goals, and troubleshoot obstacles to implementation of program concepts/skills in the future
 - Review program concepts module by module, focusing on concepts and skills that were emphasized in treatment
 - Review 'Tips for Post-Treatment'