

The Feasibility and Patient Acceptance of a Treatment Support Group in the Dialysis Setting

Dawn Haliburton-Rudy, University of Southern California, Los Angeles, CA;

Julie A. Stockard, DaVita Inc., Colorado Springs, CO; and Pamela Anderson, DaVita Inc., Colorado Springs, CO

A structured treatment support group was conducted with 2 caregivers and 6 people on dialysis who reported feelings of isolation and episodic non-psychotic depression. The patients were medically diagnosed with end-stage renal disease and are currently undergoing in-center hemodialysis for their treatment modality. Participants in the group were recruited on a volunteer basis from 4 DaVita Dialysis clinics located in Fountain and Colorado Springs, CO. The facilitating social workers utilized cognitive behavioral therapy and relaxation breathing techniques for the group. Self-reports were utilized to measure the successful outcomes of the group. The reports indicate that patients perceive group therapy in the dialysis setting positively, and that it is feasible to conduct group therapy in the dialysis setting.

INTRODUCTION

People diagnosed with end-stage renal disease (ESRD) who elect in-center hemodialysis as their treatment modality often experience mild to severe depression (Finkelstein & Finkelstein, 1999; Levy & Cohen, 2000; U.S. Renal Data System, 1999). Perhaps their depression stems from loss of independence, as they are required to devote an average of 3 hours to a single treatment of dialysis, 3 days a week; loss of kidney function; or an altered lifestyle, such as the inability to work full time, fatigue, or a perceived reduction in quality of life. Moreover, people with ESRD are often reluctant to take yet another medication, such as an anti-depressant, to alleviate their depressive symptoms, which may be attributed to the fact that many people with ESRD take upward of 10 to 12 pills a day, such as phosphate binders, to sustain their lives (Braveman & Cohen, 2002).

Further, people on dialysis are less likely to receive treatment for depression, despite being inundated by medical professionals. One possible cause of this discrepancy is that people with ESRD typically report somatic complaints that emulate depressive symptoms, such as fatigue, sexual dysfunction, and insomnia (Cohen et al., 2002). Additionally, practitioners often hesitate to prescribe anti-depressants to people with ESRD due to concern of medication antagonist effects (Cohen, Germain, & Tessier, 2003). However, the absence of a depression treatment modality can have a significant impact on both the quality of life and medical outcomes of people on in-center hemodialysis (Finkelstein & Finkelstein, 1999).

CHARACTERISTICS OF DEPRESSION AND ITS PREVALENCE IN PEOPLE ON DIALYSIS

Depression is the most common psychological problem encountered in people with ESRD (Finkelstein & Finkelstein, 1999; Kimmel, 2000; Kimmel et al., 2000; Levy & Cohen, 2000). It is imperative to clarify what is meant by depression. Although depressive symptomatology is frequently encountered in people on dialysis, to meet the Diagnostic and Statistical Manual (DSM)-IV criteria for a major depression diagnosis, 5 or more of the following symptoms must be present: anhedonia, fatigue, inattentiveness, inappropriate guilt, psychomotor agitation or retarda-

tion, significant weight loss or gain, depressed mood, and/or recurrent thoughts of death or suicide. Typically, the symptoms are accompanied by imbalanced sleep patterns, appetite, and libido. Studies that have employed the Beck Depression Inventory (BDI)—a standard self-administered questionnaire commonly used in mental health practice to screen people for depression—have reported markedly similar findings (Kimmel, 2000; Kimmel et al., 2000). These studies convey that between one-third and one-half of people on hemodialysis have scores positing at least a moderate degree of depression (BDI scores of 11 or greater). Furthermore, Wuerth et al. observed that when these individuals were then evaluated by a trained psychiatric interviewer for the occurrence of clinical depression, 85% of people on dialysis with BDI scores of 11 or greater met the DSM-IV criteria for major depression and had scores of 17 or more on the 21-item Hamilton Depression Scale (unpublished observation).

CORRELATION BETWEEN DEPRESSION AND MORTALITY RATES

Several studies have shown the negative impact depression has on outcomes in people with ESRD. In a study by Hedayati and Finkelstein (2009), 98 people with ESRD initiated on hemodialysis were followed prospectively. Within the cohort, 21 out of 26 clinically diagnosed depressed individuals compared to 31 out of 72 nondepressed individuals had died or were hospitalized at 6 months with a hazard ratio of 2.1. Further, researchers determined that the association of morbidity remained after adjustment for several demographic factors, including age, time on hemodialysis, and the number of comorbid conditions.

Many other studies have confirmed the increased risk of mortality in the depressed ESRD population. For instance, the Pathways Study, a longitudinal prospective cohort study of people with diabetes, showed that out of 110 people with stage 5 chronic kidney disease in the 4,000-person study, 22% had major depression, which was associated with a 3-fold greater risk of death compared to those with either no or few depressive symptoms (Young et al., 2010). A large 15,000-person study conducted by Soucie and McClellan (1996) evaluated the risk factors that were associated with

death in the first 90 days after initiation of hemodialysis and found that they included age, male gender, smoking, congenital heart failure, and clinical depression. One possible explanation may be that people who are depressed are less likely to adhere to their medication regimens. Researchers examined medication adherence in people on hemodialysis compared to transplant recipients and concluded that people on hemodialysis were more likely to be depressed, and, in multiple-regression analysis, the variance in depression was the only significant predictor of medication adherence in both groups (Cukor, Rosenthal, Jindal, Brown, & Kimmel, 2009).

DIFFICULTY DIAGNOSING DEPRESSION IN THE ESRD POPULATION

One potential difficulty in diagnosing depression in this population lies in the challenge of differentiating between typical somatic symptoms and overt depression. A study by Watnick, Wang, Demadura, and Ganzini in 2005 validated two different depression scales, the BDI and the Patient Health Questionnaire 9, against the gold standard Structured Clinical Interview for DSM-IV (SCID-IV) in people with ESRD. Analyzing the BDI specifically, a cutoff of 10 or greater is used in the general population to diagnose possible depressive disorder. Conversely, this study showed that in the ESRD population a cutoff value of 16 or greater had sensitivity toward depression and a specificity of 91% and 86%, respectively; thus, indicating that a value of 15 or lower did not accurately reflect the ESRD cohort's depressive symptomatology. The specificity rates portend that depression is prevalent among the population; given this data, one can predict that these individuals would thereby benefit from such interventions as a treatment support group specifically targeted to alleviate depressive symptomatology.

A REVIEW OF THE LITERATURE: THE BENEFITS OF DEPRESSION TREATMENT SUPPORT GROUPS IN THE HEMODIALYSIS SETTING

There is a paucity of research literature available to assess the effectiveness of depression related to treatment support groups in the hemodialysis setting. However, one randomized study conducted in Brazil found that an intervention group of 41 participants compared to a control group of 44 participants exhibited significant improvements of their depressive symptomatology (Duarte, Miyazaki, Blay, & Sesso, 2009). Researchers utilized cognitive behavioral group therapy (CBT) over the course of 9 months while the control group received the usual treatment offered in the dialysis unit. In both groups, the BDI, the Mini International Neuropsychiatric Interview (MINI), and the Kidney Disease and Quality of Life-Short Form (KDQOL) questionnaires were administered at baseline, after 3 months of intervention or usual treatment, and after 9 months of follow up. The intervention group exhibited significant reduction of the burden of renal disease, sleep,

quality of social interaction, overall health, and the mental component summary of the BDI overall scale and the MINI. Considering these results, researchers concluded that group CBT is an effective treatment of depression in chronic hemodialysis patients.

Another study conducted by Cukor (2007) found CBT to be a beneficial treatment for a cohort of 16 people comorbidly diagnosed with ESRD and depression. Cukor engaged the individuals in either group or individual therapy over the course of 15 weeks. Cukor found that two themes emerged within the group: people believe that depression is part of the illness and that disability prevents them from enjoying life. The goal was to have participants attempt modified versions of the activities they used to enjoy, and a combination of cognitive restructuring and behavioral assignments were used. All participants exhibited a significant decrease in their BDI-II scores at the conclusion of treatment. The mean BDI-II score decreased from 28.9 to 18.5 at the end of the treatment and was recorded at 18.8 at a 3-month follow up (possible scores range from 0 to 63, with higher scores representing an increase in depression), indicating both a significant and sustained reduction in depressive affect.

A study published in 1986 concluded that support groups in the hemodialysis setting contributed to the longevity of people diagnosed with ESRD (Friend, Singletary, Mendell, & Nurse, 1986). Each person was asked, prior to beginning dialysis, to join a group of similarly ill people to discuss common problems of stress, quality of life, and adjustment to changes in their daily lives due to ESRD. Those who joined the group did so at the start of their dialysis. Group activities were designed to teach new coping skills through group discussions and social functions. Activities, however, were not to be identified with group psychotherapy as group members were strongly opposed to psychotherapy. Critical issues of death and dying, fear of the machine, and difficulty with fluids or diet management were discussed, with each member sharing his/her own problems or successes around these issues. Social functions included summer picnics and annual Thanksgiving dinners. Food served at meetings and other functions was used to teach dietary compliance and to expose group members to a wide variety of dietary choices.

Out of the total sample of 126 people on hemodialysis, 88 were designated as participants in the group and its social activities and functions during the 10-year study. The remaining 38 people were designated as non-participants and did not take part in the group activities. A total of 30 people (22 group participants and 8 non-participants) survived the duration of the study. The results, established by the Kaplan-Meier survival curves, indicated that a higher proportion of group participants lived longer than the non-group participants. A second survival analysis, the Cox proportional hazard regression model, was performed to determine whether group participation was related to survival when controlling for 13 covariates: family history of

renal disease, psychiatric problems, blood urea nitrogen, creatinine, age, sex, religion, education, marital status, family support, work history, psychiatric history prior to entering dialysis, and year of entry into dialysis. The analysis indicated that group participation remained strongly and independently related to survival. Researchers noted, however, that survival was also strongly related to lower levels of creatinine and less strongly to the absence of psychiatric problems on dialysis and higher blood urea nitrogen.

PURPOSE OF THE STUDY

The purpose of our study is to facilitate a treatment support group for people diagnosed with ESRD who have reported experiencing depressive symptoms. Moreover, we would like to establish a protocol to be used in all DaVita Dialysis clinics that incorporates the use of treatment support groups aimed at reducing depressive symptomatology. In order to establish the value of the proposed protocol there are 2 questions this study aims to answer: 1) Will people on hemodialysis participate and respond positively to a treatment support group? 2) Is the facilitation of a treatment support group feasible? It is our hypothesis that the people on hemodialysis who participate in the treatment support group aimed at reducing depressive symptomatology will perceive the group as beneficial to their overall well-being and that it is feasible to incorporate such a group within the dialysis setting.

STUDY DESIGN

All 6 people on hemodialysis were recruited on a volunteer basis from the 4 DaVita Dialysis clinics in Colorado Springs and Fountain, CO. Participants were asked to remain at their designated clinic for a period of 6 weeks (the duration of the study). People who had been diagnosed with depression related to psychosis were not recruited, nor were those who reported feelings of suicide or who reported experiencing suicide ideation within the past 6 months. This decision was based on the social workers' determination that these individuals lacked the psychological stability to participate in the group, and that their instability would likely pose a hindrance to other group members' experiences. Further, the sample was recruited from the hemodialysis treatment modality population. People receiving peritoneal and home hemodialysis were not recruited in the study. Each of the participants was considered to be in "good enough health" (established by the center's clinical coordinator) in order to be transported to the group's location and participate in group activities.

Participants at the four clinics often expressed feeling overwhelmed by the amount of paperwork and questionnaires presented to them on a continual basis. Thus, screening tools were not used to establish depression; rather, self-reports describing feelings of anhedonia, fatigue, inattentiveness, inappropriate guilt, psychomotor agitation or retardation, significant weight loss or gain, and depressed mood present 30 days or longer, were gathered through

"chair-side" conversations with 3 resident social workers. Prior to agreeing to participate in the group, many patients expressed concern over the loss of family time and stated that this factor would prevent them from participating, thus, they were encouraged to have their caregivers participate in the group (2 caregivers agreed and remained active throughout the duration of the group). Moreover, the social workers felt that caregiver participation was crucial to successful outcomes as they were able to offer primary support to the patients in an effort to allay their depression.

The length of the study was once per week for 6 consecutive weeks and each session lasted for 1.5 hours; the study took place off-site, apart from the 4 dialysis units; and each session was facilitated by 3 resident social workers. Demographic information was not collected, nor was unrelated health information. However, we did ask participants to consent to access their medical records to gain information regarding medications and past medical problems in the event that ambulatory services were needed off-site. To answer the first question (Will people on hemodialysis participate and respond positively to a treatment support group?), we monitored each member's participation frequency in the group discussions, their willingness to engage with other group members, their tendency to remain on topic, their feelings about the group following its completion, and whether they would be willing to participate in the group again. These variables were considered to indicate participants' positive response to the group, as participation was seen as an integral component to the maintenance of the group. If individuals exhibited an unwillingness to participate in the topics of discussion or lacked interest—which was measured through the person's level of attentiveness—in the topics, then the social workers would perceive these behaviors as negative responses (refer to Table 1). Lastly, if individuals were unwilling or expressed disinterest in participating in the group again, this, too, would be seen as a negative response.

This information was obtained through self-disclosure in a sensing session that was hosted by the 3 facilitating social workers at the sixth and last session. The sensing session lasted one-half hour following the conclusion of the last session, wherein 4 questions were posed verbally to the group: What are your feelings toward the group? Which topic did you find especially helpful? Do you feel as if the group has contributed to your overall well-being? Would you participate in the group again? The answers were recorded manually by one of the social workers.

In order to answer the second question about the feasibility of a treatment support group, we asked participants about their modes of and accessibility to transportation and the ease of being transported to the location of the treatment support group. Our concern with transportation and its relation to feasibility stemmed from the lack of city and personal transportation expressed by many of the participants. Further, transportation was the only external feasibility

ity variable that we could control via offering each of the participants city bus passes. This information was obtained throughout the course of the group, as we wanted to ensure that participants did not feel over-burdened, which could possibly lead to an exacerbation of their depressive symptomatology.

Medical devices, such as blood pressure monitors, and questionnaires, such as the BDI or the KDQOL, were not pertinent to the case study because we were not measuring depressive symptomatology; therefore, they were not used. Prior to the initiation of the group, we obtained consent from each of the 3 facilitating administrators at the 4 dialysis clinics to proceed with conducting the group; further consent was not necessary. Moreover, all 6 participants and 2 caregivers were provided with a confidentiality form and a form of consent prior to the start of the initial meeting. The forms were read aloud by a facilitating social worker and each person was asked to sign both forms. Additionally, the only compensation provided to the patients and caregivers were free one-way bus passes, which were disseminated upon request.

LIMITATIONS

Interaction of selection and treatment were potential threats to our design, as we recruited participants on a volunteer basis. Hence, the participants may have had increased motivation to accept the treatment and exemplify higher rates

of engagement and participation compared to their non-volunteering counterparts. Further, the Hawthorne effect may have also been a potential threat, considering that the participants possibly exhibited socially desirable behaviors as they were well aware that their behaviors were being monitored by the facilitating social workers. Moreover, the time constraint of 6 weeks was not nearly long enough to determine the efficacy of the cognitive behavioral therapy methodology in the reduction of depressive symptomatology, thus we were precluded from assessing the patients for depression following the conclusion of the study. Lastly, our decision not to utilize depression inventory scales, such as the BDI or the KDQOL, prohibits us from extending our results to the reduction of the patient's depressive symptomatology; rather, the results are only relative to the assessment of positive regard and feasibility.

METHODS

Social workers recruited people on hemodialysis with flyers and verbal discussion while they received their dialysis treatments. They explained the purposes of the group in detail and answered questions regarding the group. Individuals were called by a social worker 1 day prior to each session to ensure attendance and to verify that they had access to transportation. Participants were provided with a snack at each session that resulted in a cost no greater than \$5 per patient. Each session covered methods designed to

Table 1.

Topic of Discussion	Technique	Participant Response
Introduction of group participants and social workers. Explanation of CBT and its effectiveness in the reduction of depression.	Explanation and introduction of diaphragmatic breathing	6 people on hemodialysis and 2 caregivers remained actively engaged and attentive to the topic
How thoughts affect your mood	Diaphragmatic breathing	6 people on hemodialysis and 2 caregivers remained actively engaged and attentive to the topic
Continuation of how thoughts affect your mood	Introduction and explanation of progressive relaxation technique	5 people on hemodialysis and 2 caregivers remained actively engaged and attentive to the topic
How your activities affect your mood	Progressive relaxation technique	6 people on hemodialysis and 2 caregivers remained actively engaged and attentive to the topic
Continuation of how your activities affect your mood	Diaphragmatic breathing	6 people on hemodialysis and 2 caregivers remained actively engaged and attentive to the topic
How contacts with other people affect your mood	Progressive relaxation technique and diaphragmatic breathing	6 people on hemodialysis and 2 caregivers remained actively engaged and attentive to the topic; 5 of the patients and 2 caregivers requested that the social workers facilitate another group in the very near future

reduce depressive symptomatology (refer to Table 1). All of the participants were encouraged to participate irrespective of the nature or topic of the specific sessions. At the end of each session, the facilitating group leader instructed the participants in a diaphragmatic breathing exercise, progressive relaxation technique, or both.

RESULTS

The results regarding our first question (Will people on hemodialysis participate and respond positively to a treatment support group?) are as follows: All of the participants reported positive feelings about the group and relayed that they wanted to participate in the group once more. Two of the patients verbally disclosed an increase in self-insight, whereby they came to recognize their depressive symptoms and were able to attribute their symptoms to negative thoughts. One of the male patients, who exhibited few self-efficacious behaviors—asking the social worker to pay his bills, requesting that the social worker schedule his doctor's appointments, and requesting the social worker to arrange for his transportation to and from dialysis—prior to his participation in the group, reported and exhibited a greater amount of self-efficacious behaviors—whereby he was paying his bills, scheduling his doctor's appointments, and arranging for his transportation—toward the latter three sessions. Additionally, 4 of the participants verbally reported increased levels of physical activity and an increase in internal motivation. Based on these results, we conclude that people on hemodialysis will react positively to a treatment support group, and that such a group may benefit people on hemodialysis.

The results regarding our second question (Is the facilitation of a treatment support group feasible?) are as follows: As mentioned earlier, all of the participants were required to secure their own mode of transportation to the specified location. On one occasion, a patient missed the group session due to a lack thereof. Of the 6 patients, 2 requested bus passes each week beginning the fourth week of the group. The remaining patients either drove themselves or had the ability to afford increased transportation costs. Neither patient disclosed feelings of burden regarding transportation or transportation-related costs. Further, we were able to secure the location for the sessions free of charge, which was provided by a physical rehabilitation facility located in Colorado Springs, CO. In addition, costs resulting from the provided snacks were minimal and were absorbed by DaVita Dialysis. Based on these findings, we resolve that it is feasible to initiate, maintain, and continue offering a treatment support group at DaVita Dialysis.

DISCUSSION

The positive results of this case study indicate that people receiving dialysis treatment at DaVita Dialysis in Colorado Springs and Fountain, CO, may benefit from a treatment support group targeted to alleviate depressive symptomatology. Although we cannot extend our results to the reduction in depressive symptoms, we can conclude

that patients regard a treatment support group positively and are willing to participate in the continuation of such a group. We can also conclude that the adjunct of a treatment support group is feasible within the hemodialysis treatment setting, and thus can be incorporated as part of the overall treatment modality. However, to assess the benefit of a treatment support group in reducing depression it would behoove future researchers to conduct a pilot study wherein they employ the utilization of depression inventory scales.

We must also note that future studies would need to take into account other feasibility variables such as high caseloads, high social worker-to-patient ratios, dialysis unit coverage, and inappropriate clerical tasks. Renal social workers are often so overburdened with inappropriate clerical duties that finding the time to engage in tasks that benefit patients is challenging. However, we assert that the more effort we put into tasks that directly benefit patients, the more likely it is that our positions within the dialysis setting will be seen as crucial to the outcomes of patients and our respective dialysis units and that the expectation to exert energy into menial clerical tasks will be quelled.

Moreover, recruitment efforts should not only come from social workers, but other health collaterals as well. For instance, nurses, technicians, and dietitians should offer this resource to individuals reporting or experiencing depression. This mutual effort will increase the likelihood that a patient will enlist in the treatment group cohort. Nevertheless, the case study provides evidence that a treatment support group incorporated within the dialysis setting is feasible and may be beneficial to people with ESRD.

It is hoped that if the personnel (social workers, physicians, nurses, and facility administrators) caring for people with ESRD in the dialysis setting are made increasingly aware of the possible alternative treatment options available for those exhibiting depressive symptomatology, treatment support groups can be devised and incorporated within the treatment modality to diminish at least some of the patients' suffering.

REFERENCES

- Braveman, C., & Cohen, L. M. (2002). Discontinuation of dialysis: The role of hospice and palliative care. *American Association of Hospice & Palliative Medicine Bulletin*, 3(1), 16–17.
- Cohen, L. M., Dobscha, S. K., Hails, K. C., Morris, J. E., Pekow, P. S., & Chochinov, H. M. (2002). Depression and suicidal ideation in patients who discontinue the life-support treatment of dialysis. *Psychosomatic Medicine*, 64, 889–896.
- Cohen, L. M., Germain, M. J., & Tessier, E. G. (2003). Neuropsychiatric complications and psychopharmacology of end-stage renal disease. In H. R. Brady & C. S. Wilcox (Eds.), *Therapy of Nephrology and Hypertension: A Companion to Brenner's The Kidney* (2nd ed., pp. 731–746). Philadelphia, PA: Elsevier Science.

- Cukor, D. (2007). Use of CBT to treat depression among patients on hemodialysis. *Frontline Reports: Psychiatric Services, 58*(5), 711.
- Cukor, D., Rosenthal, D. S., Jindal, R. M., Brown, C. D., & Kimmel, P. L. (2009). Depression is an important contributor to low medication adherence in hemodialyzed patients and transplant recipients. *Kidney International, 11*, 223–239.
- Duarte, P. S., Miyazaki, M. C., Blay, S. L., & Sesso, R. (2009). Cognitive-behavioral group therapy is an effective treatment for major depression in hemodialysis patients. *Kidney International, 76*(4), 414–421.
- Finkelstein, F. O., & Finkelstein, S. H. (1999). Psychological adaptation and quality of life of the patient with end-stage renal disease. In E. Brown & P. Parfrey (Eds.), *Complications of Long Term Dialysis* (pp. 168–187). London, UK: Oxford University Press.
- Friend, R., Singletary, Y., Mendell, N. R., & Nurse, H. (1986). Group participation and survival among patients with end-stage renal disease. *American Journal of Public Health, 76*, 670–672.
- Hedayati, S. S., & Finkelstein, F. O. (2009). Epidemiology, diagnosis, and management of depression in patients with CKD. *American Journal Kidney Diseases, 54*(4), 741–752.
- Kimmel, P. L. (2000). Psychosocial factors in adult end-stage renal disease patients treated with hemodialysis: Correlates and outcomes. *American Journal of Kidney Diseases, 35*(Suppl 1), 132–140.
- Kimmel, P. L., Peterson, R. A., Weihs, K. L., Simmens, S. J., Alleybe, S., Cruz, I., & Veis, J. H. (2000). Multiple measurements of depression predict mortality in a longitudinal study of chronic hemodialysis patients. *Kidney International, 57*, 2093–2098.
- Levy, N. B., & Cohen, L. M. (2000). End-stage renal disease and its treatment: Dialysis and transplantation. In A. Stoudemire, B. S. Fogel, & D. Greenberg (Eds.), *Psychiatric Care of the Medical Patient* (2nd ed., pp. 791–800). London: Oxford University Press.
- Soucie, J. M., & McClellan, W. M. (1996). Early death in dialysis patients: Risk factors and impact on incidence and mortality rates. *Journal of the American Society of Nephrology, 10*, 2169–2175.
- U.S. Renal Data System. (1999). *USRDS 1999 Annual Report*. Bethesda, MD: National Institutes of Health, National Institutes of Diabetes and Digestive and Kidney Diseases.
- Watnick, S., Wang, P. L., Demadura, T., & Ganzini, L. (2005). Validation of 2 depression screening tools in dialysis patients. *American Journal of Kidney Diseases, 46*(5), 919–924.
- Wuerth, D. B., Juergensen, D. M., Finkelstein, S. H., Steele, T. E., Kilger, A. S., & Finkelstein, F. O. (1997). Psychological factors and clinical outcomes on CAPD. *Advances in Peritoneal Dialysis, 13*, 121–124.
- Young, B. A., Von Korff, M., Heckbert, S. R., Ludman, E. J., Rutter, C., Lin, E. H., & Katon, W. J. (2010). Association of major depression and mortality in Stage 5 diabetic chronic kidney disease. *General Hospital Psychiatry, 32*(2), 119–124.