



The effect of brief self-management intervention for hemodialysis patients (HED-SMART) on trajectories of depressive and anxious symptoms

Konstadina Griva^{a,c,*}, Kevin F.Y. Lam^a, Mooppil Nandakumar^b, Jo-an H. Ng^a, Hayley McBain^{c,d}, Stanton P. Newman^c

^a Department of Psychology, National University of Singapore, 9Arts Link AS4 02/28, Singapore 117570, Singapore

^b National Kidney Foundation, 81 Kim Keat Road, Singapore 328836, Singapore

^c School of Health Sciences, City, University of London, Northampton Square, London, UK

^d Community Health Newham, East London NHS Foundation Trust, 9 Alie Street, London, UK

ARTICLE INFO

Keywords:

Depression
Hemodialysis
Trajectories
Intervention

ABSTRACT

Objective: Depression is often comorbid with End-Stage Renal Disease, and associated with poor adherence and clinical outcomes but course of symptoms is variable. This study sought to describe the long-term trajectories of anxiety and depression in hemodialysis patients, to identify predictors of these trajectories over 12 months and to evaluate the effectiveness of the HEModialysis Self-Management Randomized Trial (HED SMART) against usual care on symptoms of anxiety and depression.

Methods: A secondary analysis of data from a randomized controlled trial that contrasted HED SMART (n = 101) against usual care (n = 134). Depressive and anxious symptoms were assessed using the Hospital Anxiety and Depression Scale (HADS) at baseline, 1 week and at 3 and 9 months post-intervention. Latent class growth analysis identified trajectories of depression and anxiety, and their sociodemographic and clinical predictors.

Results: Symptoms of depression and anxiety over 12 months were characterized by two trajectories: low stable (depression: 55%; anxiety: 59%) with non-clinical levels of distress, and high stable (depression: 45%; anxiety: 41%) with clinical levels of distress. HED SMART predicted significant reductions in depression relative to usual care. A similar trend was noted for anxiety. Younger age, Chinese ethnicity, and more comorbidities were associated with persistent high depression. Younger age and shorter dialysis vintage was associated with persistent high anxiety.

Conclusion: A brief self-management intervention designed to support behavioral change can also lead to significant reductions in symptoms of depression and may be of great value for younger HD patients shown to be at greater risk for persistent distress.

Trial registration: ISRTN31434033.

1. Introduction

Depression is a frequent and pernicious comorbid condition among patients with End Stage Renal Disease (ESRD), with prevalence rates between 23% to 29% [1, 2]. Estimates of subclinical distress, using self-report measures rather than diagnostic assessments, are even higher. Most research, however, has measured distress at one time. Of the limited longitudinal research that has been conducted, it has been established that symptoms of distress vary markedly across patients with respect to their severity, longitudinal course and response to treatment [3, 4]. It is important to understand symptom course and individual variability to guide more targeted intervention efforts in ESRD.

Support programs for ESRD related distress are much needed as symptoms of emotional distress have been shown to be associated with poor clinical outcomes, including higher morbidity and mortality rates, and higher health care costs [5, 6]. Studies have also noted that trends over time (i.e., persisting or worsening of symptoms over time) are associated with increased cardiovascular and overall mortality risk [7, 8]. Small-scale randomized controlled trials of Cognitive Behavioral Therapy (CBT), an evidence-based treatment for depression, have been shown to reduce distress in patients on dialysis [9, 10]. Considerations however, related to high costs, intensity and the need for additional resources (e.g., specialist CBT therapists) for CBT programs coupled with a shortage of healthcare staff with psychological skills training

* Corresponding author at: Centre for Population Health Sciences, Lee Kong Chian School of Medicine, Nanyang Technological University, Clinical Sciences Building, Singapore 308232, Singapore.

E-mail address: konstadina.griva@ntu.edu.sg (K. Griva).

<https://doi.org/10.1016/j.jpsychores.2018.07.012>

Received 27 April 2018; Received in revised form 24 July 2018; Accepted 25 July 2018

0022-3999/ © 2018 Published by Elsevier Inc.

constrain their availability and wide implementation in routine renal care [11].

Self-management based programs have been widely advocated as an effective and cost-efficient means to deliver patient education and provide patients with self-management skills and strategies to promote and change their behavior as well increase their confidence in dealing with their long-term condition [12]. In ESRD, such programs, delivered and implemented by health care staff have demonstrated improvements in several outcomes including self-efficacy [13], quality of life [14], and self-report adherence and clinical markers [15].

Although it is generally hoped that broader benefits may also be achieved, little is known about the effectiveness of these interventions in reducing distress. This raises the question of whether these less resource-intensive interventions, where the focus is mainly on behavioral change, would bring about other gains notably in mental health. This is particularly pertinent in Asian settings where the stigma attached to mental health and related-services may hinder the acceptability, participation or retention in CBT programs [16–18]. The HED-SMART intervention (HEmoDialysis Self-Management Randomized Trial) is a brief self-management intervention developed through formative work in Singapore to improve treatment adherence and clinical outcomes in ESRD [15, 19]. Delivered by renal health professionals over 4 group sessions, the program was designed to support behavior change using the principles of Social Learning Theory, self-monitoring, and goal setting. Analyses of primary outcomes indicated significant benefits for HED-SMART in clinical markers, namely interdialytic weight gains (markers of fluid control) and potassium and phosphate levels with only modest loss of effects at nine months post intervention [15].

The aims of the present study were (1) to identify the trajectories of depressive and anxious symptoms over 12 months (2) to examine the effects sociodemographic and medical parameters on these trajectories and (3) to evaluate the effects of HED-SMART on the course of these emotional outcomes.

2. Methods

2.1. Study design

The data presented in this paper are part of the Hemodialysis Self-Management Randomized Trial (HED-SMART), a pragmatic cluster RCT (Trial Registration: ISRTN31434033), which used dialysis shift within each dialysis center as the unit of randomization. The methods have been described in detail previously [15]. In summary, this is a 12 month 2-group randomized controlled trial, to compare the HED SMART intervention in addition to usual care, with usual care alone. Study endpoints included clinical markers of disease control, i.e. interdialytic weights gain, potassium, phosphate levels and patient-reported outcomes, i.e. adherence, self-efficacy, self-management skills, quality-of-life and distress collected at baseline, and at 2 weeks, 3 months and 9-month follow up. The primary objectives of the trial were to determine if this brief group-based self-management intervention could improve short- and long-term, self-management skills, behavioral and clinical outcomes [15]. Part of the secondary objectives which constitute the foci of this paper, were to determine the impact of this intervention on psychological outcomes.

2.2. Setting and participants

The trial was undertaken between 2009 and 2013. The recruiting centers were dialysis centers operated by National Kidney Foundation (NKF), Singapore. NKF Singapore is a nonprofit charitable organization that caters for the lower and middle-income patients with ESRD in Singapore. NKF Singapore dialysis centres are located within the community, island wide, and run by nurses with a team of nephrologists working in rotation. The target population comprised adults, aged 21 years and above, receiving hemodialysis in one of the 11

participating National Kidney Foundation dialysis centers in Singapore for a minimum duration of six months. Participants were excluded if they were not fluent in either English, Mandarin or Malay, or had conditions that would hinder full participation in the trial (i.e., functional psychosis, organic brain disorder), learning disabilities, dementia, life-limiting medical disorders or significant hearing or visual impairments uncorrected with hearing or visual aids. Inclusion/ exclusion criteria were assessed by senior nurse through patients' medical records.

2.3. Recruitment and randomization

Patients were randomly allocated to the intervention or control condition based on their dialysis shifts to minimize contamination across patients within the same shift. Those in the intervention condition received HED-SMART over and above standard renal care, while those in the control condition received only standard renal care. Patients were informed of the results of the randomization only after having provided informed consent and completing the baseline assessment. All staff at the dialysis centers, and research personnel administering the questionnaires, remained blind to patients' study arm allocation (Fig. 1).

The intervention was then implemented at 3 weeks post-baseline, in a group format over 3 core sessions (1 to 3) and 1 booster session [19]. HED-SMART was guided by social cognitive theory and aimed to improve capability for disease management. Sessions targeted knowledge, attitudes, skills and self-management behaviors: fluid intake, diet and medication. The content and delivery format was established following rigorous process including focus groups and interviews, training and extensive piloting to develop a theory-based program that is tailored to needs of patients in local context [20]. The sessions were delivered in groups of 5–7 patients, in either English, Chinese or Malay (as per patients' preference). They were facilitated by two renal health professionals (medical social worker, renal dietician or nurse) unrelated to direct patients' care and took place over weekends (non-dialysis days) to avoid interference with dialysis center workflow and to allow more flexibility in patients' and facilitators' availability. Non-dialysis days were also preferred as cognitive abilities over dialysis cycle are shown to be better at 24-h post dialysis [21].

3. Measures

Sociodemographic information, including age, gender, ethnicity, employment status, education, and marital status, were collected at baseline. Medical/serological data, including Kt/V, nPCR, hemoglobin, albumin, comorbidities, primary cause of ESRD, and duration of hemodialysis (in months), were abstracted from medical records. The Charlson Comorbid Index (CCI) [22] was used to consolidate comorbidity burden, and subsequently scored based on previous recommendations [23]. Higher scores indicate greater comorbid burden. The CCI has been validated for use in ESRD patients [24].

Emotional distress was measured using the Hospital Anxiety and Depression Scale (HADS) [25], a well-established self-report measure of anxiety and depression. The HADS was selected not only because its omission of somatic items makes it an appropriate measure for a chronically ill population, but also because it has been linguistically validated in both Mandarin [26] and Malay [27], an important consideration for use in the multi-ethnic context of Singapore. HADS assesses symptoms of anxiety (7 items; score range = 0 to 21) and depression (7 items; score range = 0 to 21) within the past week. Higher scores indicate higher levels of depressive and anxious symptoms – with scores ≥ 8 for each subscale signifying caseness as per internationally validated criteria across a range of patient populations and cultures [28, 29]. In the present study, both the HADS-D and HADS-A demonstrated good internal consistency across all assessments ($\alpha > 0.70$). Participants self-completed the study questionnaire. The researcher provided

Download English Version:

<https://daneshyari.com/en/article/7325011>

Download Persian Version:

<https://daneshyari.com/article/7325011>

[Daneshyari.com](https://daneshyari.com)