The effects of brief self management intervention for Hemodialysis patients on trajectories of depressive and anxious symptoms

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The disease context

- Kidney disease one of top NCDs necessitating global health action (UN WHO, 2011)
- Increasing numbers due to diabetes and ageing
  - More complex health care needs and regimens
  - New challenges for renal care
- Demands on health care resources increases
  - Staggering costs of dialysis care — Hemodialysis main stay but increased emphasis on home/community care models
**Patient reported outcomes**

- Depression is common in Patients with ERSD (see reviews Chan et al. 2011; Palmer et al. 2013)
  - 23-29%
  - Worse clinical outcomes (mortality and hospitalization)

- CBT interventions shown to be beneficial (Cukor et al. 2014; Duarte et al. 2009) but constrained:
  - small samples
  - lack of control group and/or randomization
  - High cost and need for resources limit availability
  - Self management programs more widely available but focus mainly on adherence

**Programs of support**

HED SMART

Griva et al., (2011) BMC Nephrology [ISRTN 31434033]

Griva et al. 2013 Nephrol Dial Transplant
HED SMART

Objective

1. To develop a program of support (HED SMART) for patients so as to improve outcomes
2. To evaluate short and long term outcomes of HED SMART

HED SMART  
(Lai, Low, Moopil, Griva 2012; Griva et al. 2013)

- Develop a tailored program
  - View CKD from patient’ perspective
  - Cultivate an ethos of self management – 'help patients help themselves'

- Address needs of staff
  - Educate and train in theory-based techniques (training course)
  - Change communication from didactic to shared
  - Manual + on site support
What is HED SMART?
Engage. Empower. Equip

- Interactive
- Support
- Share Insight

What is HED SMART?
Evoking from people what they already have
What is HED SMART?

Light touch intervention led by HCPs

- Session 1: Fluid
- Session 2: Diet
- Session 3: Medication
- Telephone Follow-up
- Session 4: Booster

*If no issues with meds – on exercise

FIGURE: Flow Chart Of Study Design
Methods - Measures

**Primary outcomes**
- IDWGs, biochemical markers (PO$_4$, K)

**Secondary Outcomes**
- Self-report adherence
- Self-management skills and Attitudes
- **Emotional Distress**
  - Hospital Anxiety and Depression Scale (HADS)

Results - Retention
Retention in HED SMART (number of sessions attended)

<table>
<thead>
<tr>
<th>Sessions</th>
<th>1 session</th>
<th>2 sessions</th>
<th>3 sessions</th>
<th>All 4 sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>98.2%</td>
<td>92%</td>
<td>87%</td>
<td>72.4%</td>
</tr>
</tbody>
</table>

Data complete across study window

<table>
<thead>
<tr>
<th>Time</th>
<th>T1 [Baseline]</th>
<th>T2</th>
<th>T3</th>
<th>T4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>100%</td>
<td>83%</td>
<td>79.9%</td>
<td>74.5%</td>
</tr>
</tbody>
</table>

Study Cohort: baseline - 48 weeks

- Total patients screened: N = 956
- Met inclusion criteria: n = 532
- Did not meet inclusion criteria: n = 424
- Provided informed consent: n = 259
- Declined participation: n = 273

Randomised Usual care
N=134
HEDSMART:
N= 101

T1 [Baseline] n = 235
T2 [9-weeks] n = 214
T3 [22-weeks] n = 121
T4 [48-weeks] n = 193
Depression

Course of Depression
Growth Mixture Modeling Trajectories

(Low stable) Resilience Vs. Chronic (High stable)

Predictors (High Stable)

- Age (Younger)
  - Est. = -.082, S.E. = .028, \( p = .003 \)

- Ethnicity (Chinese)
  - Est. = 1.012, S.E. = .37, \( p = .006 \)

- Co-morbidities
  - Est. = .27, S.E. = .11,
  \( p = .012 \)
HED SMART on depression trajectories

- Low Stable (Usual Care)
- Low Stable (Intervention)
- High Stable (Usual Care)
- High Stable (Intervention)

Est. = -.03, SE = .01, p = .025

Anxiety
Course of Anxiety
Growth Mixture Modeling Trajectories

(Low stable) Resilience Vs. Chronic (High stable)

Predictors (High Stable)

- Age (Younger)
  - Est. = -.055, S.E. = .021, p = .009

- Dialysis Vintage (Shorter)
  - Est. = -.085, S.E. = .037, p = .023

HED SMART on anxiety trajectories

Est. = -1.23, SE = .65, p = .057
Qualitative Feedback

Strengths

- Sharing of ideas (69.6%)
  ‘Sometimes you discuss and ideas come out that you never think of before and others have. Than not bad la, may be I can try it’

- New ways of coping/knowledge (54%)
  ‘learnt about diet so before I don’t know that oats high in phosphate so I just go out without binders’

- Social support (48.7%)
  ‘Hearing sharing their experience then I know I am not alone and it helps lah’

- Input from facilitators (28%)
  ‘when you have questions they can answer you on the spot and improve your memory of it’
CONCLUSIONS

Conclusions

- Polarized distress trajectories (resilience vs. chronic)
- Risk factors: Young age and Chinese ancestry
- HED SMART resulted in reduced depression symptoms for both high and low stable groups
- Similar trends for symptoms of anxiety
- Given the feasibility of the program, it has good potential for providing effective support for HD patients
THANK YOU

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