CBT in the Treatment of Persistent Insomnia in Patients with Cancer

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Overview of work completed at UGSC
- Treatment of insomnia in cancer patients using CBT
- Symptom clusters within cancer populations
- Development and impact of insomnia in cancer patients

Understanding the development of persistent insomnia in breast cancer patients
- Overview of prevalence and persistence
- What do we still need to find out?
- Outline of design and methods
- Potential impact
40-50% of people with cancer have sleep problems; 21% meet diagnostic criteria; 25% on sleeping pills
Evidence of sleep disturbance continuing one year post diagnosis
Research participants report greater acceptance of and satisfaction with, non-pharmacologic treatments over pharmacologic ones
Insomnia is treatable with Cognitive Behaviour Therapy
Sleep problems ranked 5th highest of 14 distressing symptoms before cancer treatment and 4th highest after
Profile of 4,355 cancer patients on the PHQ-9

Is insomnia important to cancer patients?

Profile of 4,355 cancer patients on the PHQ-9

Overlap in symptoms of insomnia, fatigue and depression in patients with cancer (n = 3,021)

- **No Symptoms**
  - N = 1702 (57.7%)

- **Sleep**
  - N = 830 (28.1%)
  - 320
  - 27
  - 33
  - 60

- **Depression**
  - N = 277 (9.4%)
  - 157
  - 33
  - 27

- **Fatigue**
  - N = 870 (29.5%)
  - 326
  - 327

Sharpe, Espie, Fleming et al, unpublished data
Treatment of insomnia in cancer patients

Randomised controlled clinical effectiveness trial of cognitive behaviour therapy versus treatment as usual for insomnia in cancer patients

Hypothesised that CBT would be associated with:

1. significantly greater improvement in sleep pattern and quality post treatment
2. improved quality of life post treatment
3. benefits would be maintained at 6 month follow-up

Inclusion criteria:
• diagnosis of breast, colorectal, prostate or gynaecological cancer
• satisfy criteria for chronic insomnia
• at least 1 month post treatment
• 18 years or over

Exclusion criteria:
• short term (acute) insomnia
• chemotherapy or radiotherapy within last month
• evidence of other sleep disorder
• evidence of drug misuse
Nurse practitioner as CBT therapist

Delivered in small groups (4-6 people)

Manualised programme

5 weekly 1 hour sessions
Therapeutic regimes:

CBT:
sleep information
sleep hygiene & relaxation
sleep scheduling
managing thoughts & worries
overview

TAU:
based on standard clinical practice
received no additional help for insomnia during trial
completed all assessments as for the CBT condition

2:1 randomisation in favour of the intervention was in operation
## Results – patient demographics

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Number of participants</strong></td>
<td>100 (CBT) / 50 (TAU)</td>
</tr>
<tr>
<td><strong>Age in years</strong></td>
<td>61</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>103F / 47M</td>
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<tr>
<td><strong>Cancer site</strong></td>
<td></td>
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<tr>
<td></td>
<td>breast (58%)</td>
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<tr>
<td></td>
<td>prostate (22.6%)</td>
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<tr>
<td></td>
<td>colorectal (16%)</td>
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<tr>
<td></td>
<td>gynaecological (3.4%)</td>
</tr>
<tr>
<td><strong>Years between cancer diagnosis and sleep screening</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Reported cause of insomnia</strong></td>
<td>cancer related (64%)</td>
</tr>
<tr>
<td></td>
<td>stress (26.6%)</td>
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<tr>
<td></td>
<td>other (9.4%)</td>
</tr>
<tr>
<td><strong>Insomnia duration (years)</strong></td>
<td>4.5</td>
</tr>
<tr>
<td><strong>Sleep medication (yes / no)</strong></td>
<td>22.8% / 77.2%</td>
</tr>
</tbody>
</table>
Results - sleep onset latency

Baseline Post-treatment 6mfu

Minutes

Baseline

Post-treatment

6mfu

SOL - CBT

SOL - TAU

Results - sleep onset latency

Baseline Post-treatment 6mfu

Minutes

Baseline

Post-treatment

6mfu

SOL - CBT

SOL - TAU

Results - sleep onset latency

Baseline Post-treatment 6mfu

Minutes

Baseline

Post-treatment

6mfu

SOL - CBT

SOL - TAU

Results - sleep onset latency

Baseline Post-treatment 6mfu

Minutes

Baseline

Post-treatment

6mfu

SOL - CBT

SOL - TAU
Results – time awake during the night

Baseline: 62 minutes
Post-treatment: 51 minutes
6mfu: 26.1 minutes

WASO - CBT
WASO - TAU
Results – quality of life data

Difference in standardised quality of life scores (assessment – baseline)

FACT - Functional
FACT - Physical
HADS - Anxiety
HADS - Depression
FSI - Interference

CBT
TAU

Post-treatment 6 months

FACT - Functional
FACT - Physical
HADS - Anxiety
HADS - Depression
FSI - Interference
A qualitative study exploring the association between sleep disturbance, fatigue and emotional distress in cancer patients

Research question:
From the personal experience of cancer patients, how does sleep disturbance develop, how is it maintained and what is its impact?

Focus group questions:
(i) When did your sleep first become disturbed?
(ii) What do you think caused your insomnia?
(iii) What impact did insomnia have on your life?

(i) *When did your sleep first become disturbed?*

- 19 participants reported the onset of their sleep disturbance followed their cancer diagnosis.

- 2 participants had an existing problem with sleep prior to diagnosis (however both of these remarked that their cancer diagnosis aggravated their sleep).

“I put my sleep problems down to the fact that I’d had cancer or I was on cancer drugs or something and eventually I thought, you know, I can’t remember the last time I slept properly” (Participant 4: female)

“I found it was the cancer treatment rather than the cancer diagnosis, but I suppose we are all different in how it affects us psychologically” (Participant 11: female)

“I had an existing problem…but I got much worse after I was diagnosed with cancer” (Participant 14: male)

‘It was either just the stress of the diagnosis catching up with me that caused my sleep problem or the diagnosis and I didn’t recognise it at the time” (Participant 1: male)
(ii) What do you think caused your insomnia?

- “experience of being a cancer patient”
- “suppressed stress”
- “lack of daily routine”
- “bad sleep pattern” (i.e. daytime naps, late rising times etc)
- “chemotherapy/radiotherapy”
- “adjuvant hormone therapy” (resulting in hot flushes, nocturia etc)
(iii) What impact did insomnia have on your life?

<table>
<thead>
<tr>
<th>THEME</th>
<th>SUB-THEMES</th>
<th>FREQUENCY</th>
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<tbody>
<tr>
<td>Mood</td>
<td>Irritability</td>
<td>4 (19%)</td>
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<tr>
<td></td>
<td>Change in temperament</td>
<td>7 (33%)</td>
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<tr>
<td></td>
<td>Guilt about tiredness</td>
<td>3 (17%)</td>
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<tr>
<td></td>
<td>Frustration</td>
<td>2 (8%)</td>
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<tr>
<td></td>
<td>Helplessness</td>
<td>4 (19%)</td>
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<td></td>
<td>Loss of confidence</td>
<td>2 (8%)</td>
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<tr>
<td></td>
<td>Lack of enthusiasm for life</td>
<td>3 (17%)</td>
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<tr>
<td>Physical symptoms</td>
<td>Feeling tired/fatigued</td>
<td>12 (58%)</td>
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<tr>
<td></td>
<td>Feeling nauseous</td>
<td>3 (17%)</td>
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<td></td>
<td>Head thumping</td>
<td>4 (19%)</td>
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<td></td>
<td>Heavy eyes and body</td>
<td>3 (17%)</td>
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<td></td>
<td>Heightened pain</td>
<td>2 (8%)</td>
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<td></td>
<td>Hyper-arousal</td>
<td>3 (17%)</td>
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<tr>
<td>Relationships</td>
<td>Difficulty relating to others</td>
<td>2 (8%)</td>
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<tr>
<td></td>
<td>Intolerant</td>
<td>2 (8%)</td>
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<td></td>
<td>Poor conversation skills</td>
<td>3 (17%)</td>
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<tr>
<td></td>
<td>Rescheduled social interactions</td>
<td>10 (50%)</td>
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<tr>
<td></td>
<td>Rescheduled activities/putting</td>
<td>10 (50%)</td>
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<tr>
<td></td>
<td>things off</td>
<td></td>
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<tr>
<td></td>
<td>Feeling misunderstood</td>
<td>3 (17%)</td>
</tr>
<tr>
<td></td>
<td>Withdrawn/reclusive</td>
<td>4 (19%)</td>
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</table>
What impact did insomnia have on your life?

<table>
<thead>
<tr>
<th>Sleep quality</th>
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<tbody>
<tr>
<td>Easily disturbed</td>
<td>3 (17%)</td>
</tr>
<tr>
<td>Concern about disturbing partner</td>
<td>5 (25%)</td>
</tr>
<tr>
<td>Restlessness</td>
<td>3 (17%)</td>
</tr>
<tr>
<td>Frequent night-time awakenings</td>
<td>14 (67%)</td>
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<thead>
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<th>Behavioural modifications</th>
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<tr>
<td>Daytime naps</td>
<td>9 (42%)</td>
</tr>
<tr>
<td>Early retiring time</td>
<td>2 (8%)</td>
</tr>
<tr>
<td>Lie-in</td>
<td>5 (25%)</td>
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<tr>
<td>Sleep in different room from partner</td>
<td>5 (25%)</td>
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<tr>
<td>Altered bedtime routine</td>
<td>3 (17%)</td>
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<thead>
<tr>
<th>Cognitive consequences</th>
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<tbody>
<tr>
<td>Memory deficits</td>
<td>5 (25%)</td>
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<tr>
<td>Lack of concentration</td>
<td>2 (8%)</td>
</tr>
<tr>
<td>Cognitive intrusions about sleep</td>
<td>3 (17%)</td>
</tr>
<tr>
<td>Catastrophizing</td>
<td>9 (42%)</td>
</tr>
<tr>
<td>Lack of control</td>
<td>5 (25%)</td>
</tr>
<tr>
<td>Pressure to be ‘normal’</td>
<td>7 (33%)</td>
</tr>
<tr>
<td>Worry about next nights sleep</td>
<td>5 (25%)</td>
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Further research questions (commenced Oct 2010):

(i) Identify factors which predict susceptibility to developing a persistent sleep complaint

(ii) Describe the natural history of insomnia in breast cancer patients

(iii) Provide initial evidence regarding when best to provide sleep intervention during active/follow-up cancer treatment and with which CBT components
Design and methods

• Prospective quantitative approach which tracks 250 newly diagnosed breast cancer patients during active and follow up cancer treatment

• Approach permits clear identification of personal reactions to both acute and persistent sleep problems

• Cohort will be identified for tracking over 12 month period
Screening, sleep history, sleep status assessment, ancillary questionnaires, stroop

Sleep status assessment, ancillary questionnaires, stroop

Sleep status assessment
Summary

- Sleep is an important, yet neglected, aspect of cancer care
- Treating insomnia in cancer ‘survivors’ improves sleep, and other outcomes
- Early sleep intervention may prevent the development of chronic sleep problems
- A practical focus upon sleep may improve coping and reduce stress
- All of the above would be popular with patients
MSc in Behavioural Sleep Medicine

www.glasgowsleepcentre.co.uk