Evidence Table

Clinical area: Light therapy for seasonal affective disorder

Study Type: Randomized controlled trial.
Study Aim: To test the efficacy of a cognitive behavioral therapy (CBT) for SAD, and compare it with light therapy.

Outcomes
- **Primary**: Total score on 24-item Hamilton Depression Scale, Seasonal Affective Disorders Version (SIGH-SAD) at post-treatment follow-up.
- **Secondary**: SIGH-SAD remission (defined as ≥50% reduction in score); Beck Depression Inventory (BDI).

Design
- **Number of subjects**: N=61 randomized.
- **Description of study population**: >80% female; mean age=45 years, 20% non-White.
- **Inclusion criteria**: Age 18 or older; met DSM criteria for major depression, seasonal pattern; met SAD-SIGH criteria for a current SAD episode.
- **Exclusion criteria**: Other psychiatric treatment, concurrent Axis 1 disorder, bipolar-type SAD.
- **Intervention**: Participants were randomized to 1 of 4 conditions: 1) CBT (1.5 hour sessions twice a week for 6 weeks); 2) Light therapy (LT): SunRay 10,000-lux light box starting with two 45-minute daily sessions in the morning and evening for 1 week, with individually tailored adjustments starting at week 2; 3) Combination of CBT and LT; 4) Wait-list control group.
- **Source of outcome data**: Evaluation by trained advanced clinical graduate students.
- **Length of follow-up**: 6 weeks. There was also a longer term follow-up in the summer.

Validity
- **Blinding?** Blinded assessment.
- **Appropriate randomization procedures?** Yes.
- **Appropriate comparison intervention?** No true placebo.
- **Treatment/control groups comparable at baseline?** There were some between group differences e.g. percentage of females varied from 80%-100%.
- **Other than intervention, was care/follow-up similar in each group?** Yes.
- **Adequate compliance with intervention?** Yes. Participants randomized to a CBT condition completed a mean of 10.3 out of 12 sessions.
- **Sufficient statistical power?** Yes.
- **Intention to treat analysis?** Yes, both ITT and completer analyses.
- **Completeness of follow-up**: Post-treatment: 54/61 (89%). Summer follow-up: 38/41 (93%) in active treatment groups.
• Industry funding? No.
• Conclusions regarding validity of methods: There were a small number of participants in each group, and no true placebo group. Patients were not blinded to treatment group.

Results

Primary outcome, mean (SD) total SIGH-SAD post-treatment, intention to treat analysis

<table>
<thead>
<tr>
<th></th>
<th>LT (n=16)</th>
<th>CBT (n=15)</th>
<th>CBT+LT (n=15)</th>
<th>Wait-list (n=15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>12.7 (10.5)</td>
<td>12.9 (10.5)</td>
<td>8.5 (6.5)</td>
<td>23.1 (8.8)</td>
</tr>
</tbody>
</table>

Pairwise statistical comparisons p-value

- LT vs. waitlist: 0.005
- CBT vs. waitlist: 0.008
- CBT+LT vs. waitlist: <0.001
- LT vs. CBT: 1.000
- LT vs. CBT+LT: 0.508
- CBT vs. CBT+LT: 0.472

LT=light therapy; CBT=cognitive-behavioral therapy

Summer follow-up: Mean (SD) total SIGH-SAD, active treatment groups, completer analysis

<table>
<thead>
<tr>
<th></th>
<th>LT</th>
<th>CBT</th>
<th>CBT+LT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>5.8 (4.2)</td>
<td>6.5 (6.8)</td>
<td>4.4 (5.4)</td>
</tr>
</tbody>
</table>

No significant differences

Authors’ Conclusions
“…CBT, alone or combined with LT, holds promise as an efficacious SAD treatment and warrants further study…”

Reviewer’s Conclusions
After 6 weeks of treatment, light therapy, CBT and their combination were all more effective at reducing the SIGH-SAD score than a wait-list control group, and there was no significant difference between LT and CBT. There was no true placebo group, so the extent to which the placebo effect accounts for the treatment effects is not known. Being in a wait-list control group may have had a negative impact on individuals e.g. they expected to wait until they were treated before they improved.