Cognitive Therapy and Bright Light Therapy for Depression in Breast Cancer Patients: Comparison of Treatment Preferences and Expectancies

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INTRODUCTION

- Depressive symptoms affect up to 58% of cancer patients (Massie, 2004);
- Cognitive therapy (CT) has been found to be efficacious in this population, but some patients prefer trying alternative treatments to improve their mood, such as bright light therapy (BLT);
- Studies conducted in the context of depression suggest that patients' preferences for a treatment option may influence clinical outcomes (e.g., Mergl et al., 2011);
- High expectancies for improvement are also recognized as an important predictor of treatment efficacy, but only a few clinical trials comparing active treatments have measured this variable.

STUDY GOAL

To compare preferences and treatment expectancies of cancer patients randomized to CT with those randomized to BLT for the treatment of depression.

METHODS

Recruitment

As part of a larger randomized controlled trial comparing the efficacy of CT for depression and BLT to decrease depressive symptoms:

- Potential participants were recruited at l'Hôpital du St-Sacrement (HSS) and L'Hôtel-Dieu de Québec (L'HDQ; CHU de Québec), Québec, Canada;
- At HSS:
  - Women diagnosed with breast cancer received a letter, signed by their surgical oncologist, inviting them to return a written consent allowing us to contact them by phone to assess their eligibility;
- At L'HDQ:
  - A letter, signed by the radiation oncologists' team, was handed to patients who were finishing their radiation therapy.

Participants

Inclusion criteria were

- to have received a diagnosis of non-metastatic breast cancer in the past 18 months;
- to obtain:
  - a score ≥ 7 on the depression subscale of the Hospital Anxiety and Depression Scale (HADS-D; Savard et al., 1998);
  OR
  - a score ≥ 14 on the Beck Depression Inventory-II (BDI-II; Beck et al., 1996);
- to be aged between 18 and 75 years old;
- to be able to read and understand French.

Exclusion criteria were:

- to have received BLT in the past month or a CT for depression in the past year;
- to have severe cognitive impairments (e.g., Alzheimer's disease) or psychiatric disorder (e.g., severe major depressive disorder);
- to have suicidal ideations with a risk of acting out, or to have made a suicide attempt in the past five years;
- to have started using a psychotropic medication or to have changed the dosage or frequency of use in the last month, or planning to do so during the next two months;
- to use a photosensitive medication;
- to have a disease contraindicating BLT (e.g., severe cataracts, diabetes).

2635 patients were solicited to take part in this study

- 1743 agreed to be screened for depression;
- 106 were eligible (14.3% of patients screened);
- 62 of them agreed to participate and were randomized to CT or BLT (58.5% of eligible patients);
- 47 (final sample) completed the questionnaire assessing treatment preferences and expectancies.

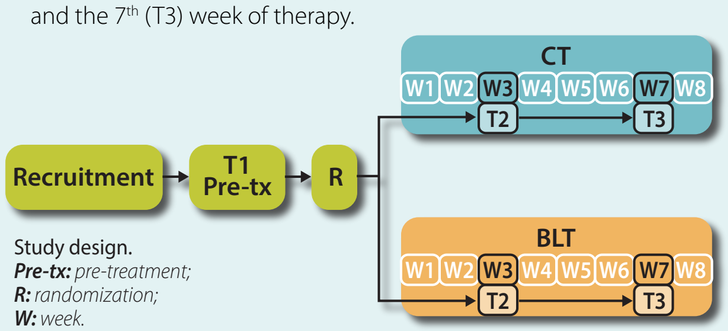
Table 1. Participants' demographic and clinical characteristics at baseline (*N* = 47)

Variables	*M (SD)*	%
Age (years; range = 33-75)	56.5 (10.4)	
Marital status		
Married/Cohabitating		66.0
Single		19.1
Separated/Divorced		8.5
Widow		6.4
Education		
High school		44.7
College		21.3
University		31.0
Occupation		
Retired		38.3
Full-time work		31.9
Sick leave		19.1
Unemployed/Looking for work		6.4
Part-time work		4.3
Time since cancer diagnosis (months; range = 0.3-22.6)	14.6 (4.6)	
Adjuvant treatments received*		
Surgery		100.0
Radiation therapy		83.0
Hormone therapy		74.5
Chemotherapy		55.3
Trastuzumab		12.8
Depressive symptoms		
BDI-II (range = 12-35)	22.3 (5.8)	
HADS-D (range = 3-15)	10.0 (2.3)	

**The total exceeds 100% because some patients received more than one adjuvant treatment.*

Procedure

- Telephone screening:
  - Assessment of the main eligibility criteria, including depressive symptoms;
- Face-to-face interview:
  - Confirmation of patients' eligibility and assessment of treatment preferences and expectancies (T1);
- Randomization to:
  - CT: 8 weekly sessions of 50 minutes, administered individually;
  OR
  - BLT: exposition to a light box at home 30 minutes every morning, during 8 weeks;
- Reassessment of treatment expectancies after the 3rd (T2) and the 7th (T3) week of therapy.



Study design.
Pre-tx: *pre-treatment;*
R: *randomization;*
W: *week.*

Measures

- A one-item questionnaire (at T1 only) assessing patients' preference between receiving CT or BLT:

Do you have a preference between cognitive therapy or light therapy? If so, to what extent?

I prefer **cognitive therapy** | I prefer **bright light therapy**

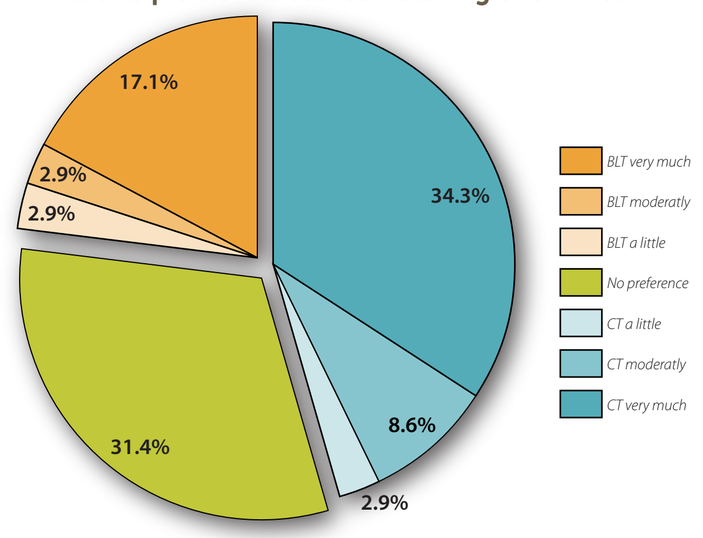
3 Very much | 2 Moderately | 1 A little | 0 No preference | 1 A little | 2 Moderately | 3 Very much

- A 5-item questionnaire, based on Borkovec & Nau (1972), assessing treatment expectancies about CT and BLT, with a 10-point Likert scale ranging from "0" (*not at all*) to "10" (*very much*):

1. **How logical does CT/BLT seem to you?**
2. **How confident would you be that CT/BLT will be successful in improving your mood in the short term?**
3. **How confident would you be that CT/BLT will be successful in improving your mood in the long term?**
4. **How confident would you be in recommending CT/BLT to a friend with cancer to improve his/her mood?**
5. **How successful do you feel CT/BLT would be if it were commonly used to help cancer patients with depressed mood?**

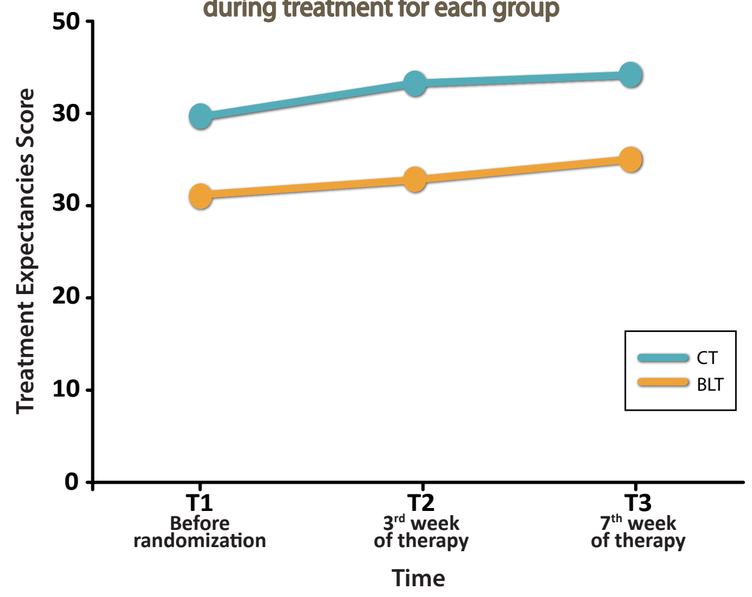
RESULTS

Patients' preferences between receiving CT or BLT at T1



- Prior to randomization, a larger proportion of participants preferred to be assigned to CT (45.8%) than to BLT (22.9%), while approximately one third had no preference;
- Participants with a strong preference for CT (34.3%) were twice as many as those with a strong preference for BLT (17.1%).

Treatment expectancies before and during treatment for each group



- Linear mixed models using a group X time factorial design revealed significant overall group and time main effects, but no significant group X time interaction;
- Participants assigned to CT consistently reported greater treatment expectancies than those assigned to BLT at all time points, $F(1, 45) = 15.08$, $p < .001$;
- Treatment expectancies increased between T1 and T3 in both conditions, $F(2, 75) = 3.99$, $p = .02$.

CONCLUSION

- These findings revealed that, for this sample of breast cancer patients, a larger proportion had a strong preference for receiving CT rather than BLT to treat their depressive symptoms;
- Moreover, CT induced more treatment expectancies than BLT, before and during treatment;
- Future randomized controlled trials comparing two or more active conditions should assess the impact of differential treatment preferences and expectancies on treatment efficacy.