Effects of Cognitive Therapy for Depression on Insomnia in Women with Metastatic Breast Cancer

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INTRODUCTION

- High rates of insomnia are found in patients with advanced cancer, affecting up to 96% of them.
- Insomnia often co-occurs with depressive symptoms and the relationship between insomnia and depression appears to be bidirectional. This suggests that treating one condition may also improve the other one.
- Studies conducted in individuals without cancer have shown that insomnia often remains untreated after cognitive-behavioral therapy for depression, with a rate of residual insomnia at posttreatment as high as 51%.
- The effects of a psychological intervention targeting depression on insomnia in the context of cancer are largely unknown.

OBJECTIVE

This study aimed to assess the effects of cognitive therapy (CT) for depression on insomnia rates and severity in women with metastatic breast cancer.

METHODS

PROCEDURE:

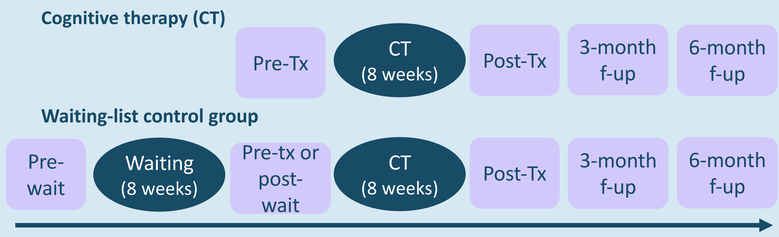

Fig. 1. Study design. Pre-tx: pretreatment; post-tx: posttreatment; f-up: follow-up; pre-wait.: prewaiting; post-wait.: postwaiting; CT: cognitive therapy.

- The study is a secondary analysis of Savard et al.'s study (2006)

PARTICIPANTS:

- 37 women with metastatic breast cancer (stage IV)

MEASURES:

- *Hospital Anxiety and Depression Scale (HADS)*
  - 14 items rated on a 4-point Likert scale
  - Subscales : ① Anxiety (HADS-A); ② Depression (HADS-D)
  - Clinical depression score: ≥ 7 on the HADS-D
- *Insomnia Severity Index (ISI)*
  - 7 items rated on a 5-point Likert scale (from 0 = "not at all " to 4 "very much")
  - Total ranging from 0 to 28
  - Clinical insomnia score ≥ 8

ANALYSIS

Table 1. Participants' demographic and medical characteristics (N=37)

Variables	Cognitive therapy (n = 21)		Waiting-list control (n = 16)	
	Mean	*SD*	Mean	SD
Age	51.47	8.05	51.66	8.62
	n	*%*	*n*	*%*
Marital Status				
Married or living with partner	12	57.1	8	50.0
Other	9	42.9	8	50.0
Education completed				
High school or less	6	28.6	5	31.3
Junior College	5	23.8	6	37.5
University	10	47.6	5	31.3
Occupation				
Working	3	14.3	3	18.8
Not working	18	85.7	13	81.3
	Mean	*SD*	Mean	*SD*
Time since initial cancer diagnosis (years)	7.6	6.1	4.4	3.3
Time since metastatic diagnosis (years)	1.7	2.0	1.3	1.5
Number of recurrences (local and metastatic)	3.4	1.7	2.8	1.3

Table 2. Group comparisons on mean insomnia scores and proportion of patients having a clinical level of insomnia

Variables	TIME	GROUP	
		Cognitive therapy	Waiting-list control
Mean insomnia score	Pretreatment	11.5	13.8
	Posttreatment / post-waiting	5.6	12.6
Proportion of patients with clinical insomnia	Pretreatment	80.0 %	85.7 %
	Posttreatment / post-waiting	27.5 %	75.3 %

- The ISI score decreased significantly from pre- to post-treatment overall.
  $F(1,30.1) = 7.33$, $p < 0.05$
- Overall, the proportion of patients with clinical insomnia (ISI ≥ 8) decreased significantly from pre- to post-treatment.
  $F(1,31.84) = 5.69$, $p < 0.05$
- The mean insomnia severity score differed significantly between groups at post-treatment.
  $F(1,32.3) = 8.02$, $p < 0.01$
- However, no significant group-by-time interactions were observed.

Pooled analyses

Table 3. Proportion of patients having a clinical level of insomnia and adjusted means at each time assessment obtained from the pooled data set (N=37)

Variables	Time			
	Pre-treatment	Post-treatment	3-month follow-up	6-month follow-up
Mean insomnia severity score	**12.1** A	5.3 B	8.4 A B	5.8 B
Proportion of patients with clinical insomnia	**78.2 %** A	28.5 % B	47.7 % A B	22.4 % B

Note. Means and proportions with the same letter are not significantly different at the 0.05 alpha threshold corrected with the Bonferroni method.

- The mean insomnia score significantly decreased over time.
  $F(3,43.7) = 17.08$, $p = 0.001$
- The proportion of patients with a clinical level of insomnia significantly decreased over time.
  $F(3,67.58) = 5.58$, $p < 0.01$
- 22% to 48% of the patients still had clinical insomnia following CT for depression.

CONCLUSIONS

- Insomnia decreased over time but cognitive therapy for depression was not associated with a significantly greater reduction of insomnia as compared to a waiting-list control condition.
- Although the absence of significant difference may be due to a lack of statistical power, it remains that a substantial proportion (22 to 48%) of this sample of women reported residual insomnia symptoms during follow-up.
- A concomitant treatment that directly targets insomnia should therefore be provided to women with co-occurring depression and insomnia.

Reference

Savard, J., Simard, S., Giguère, I., Ivers, H., Morin, C. M., Maunsell, E., Gagnon, P., Robert, J., & Marceau, D. (2006). Randomized clinical trial on cognitive therapy for depression in women with metastatic breast cancer: psychological and immunological effects. *Palliat Support Care*, *4*(3), 219-237. https://doi.org/10.1017/s1478951506060305