



Bracing for the Worst? A Longitudinal Experience Sampling Study of How Expectation Management Strategies and Intolerance of Uncertainty Predict Scanxiety in Childhood Cancer Survivors

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# Bracing for the Worst?

## A longitudinal experience sampling study of how expectation management strategies and intolerance of uncertainty predict scanxiety in childhood cancer survivors



### Background

Anxiety from anticipating oncology scans and results (i.e. "scanxiety") is associated with reduced emotional wellbeing and quality of life.

Using a novel, intensive longitudinal experience sampling design we investigated how intolerance of uncertainty and expectation management strategies influence the experience of scanxiety in childhood cancer survivors.

### Methods

55 childhood cancer survivors recruited from the Bass Center for Childhood Cancer at the Stanford Children's Hospital completed baseline assessment of scanxiety and validated surveys assessing intolerance of uncertainty (IUS) and three expectation management strategies in relation to surveillance scans:

1. Bracing for the worst
  - a. I was bracing myself for the worst possible outcome
  - b. I tried to keep expectations low for the outcome
2. Positive expectation management
  - a. I was hoping for the best possible outcome
  - b. I tried to be optimistic about the outcome

Ecological Momentary Assessments (EMA) surveys were completed 3 times per day for 11 days surrounding a routine surveillance scan (33 surveys total). EMA surveys captured momentary stress, negative and positive affect, and fear of cancer recurrence

Linear mixed effects models examined how intolerance of uncertainty and expectation management strategies (bracing and positive expectation management) predicted fear of cancer recurrence across the surveillance period when controlling for time since treatment completion and treatment intensity

### Participants

- Range of previous diagnoses including ALL, AML, Lymphoma, CNS Tumor, and Bone Cancer
- Age range: 11-23, M= 17
- 54.5% Male
- Average of 2.88 years since treatment completion
- Median intensity treatment rating: 3

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### Conclusions

Individual differences in intolerance of uncertainty and bracing for the worst are associated with scanxiety both cross-sectionally and within an intensive longitudinal experience sampling design

Positive expectation management does not buffer against experiencing fear of cancer recurrence

Targeting intolerance of uncertainty and the expectation management strategy of bracing for the worst could be a helpful intervention target to reduce the negative influence of scanxiety among childhood cancer survivors



- Bracing for the worst and intolerance of uncertainty are significantly correlated to both scanxiety ( $r=.438, p=.001, r=.34, p=.015$ ) and fear of cancer recurrence at baseline ( $r=.418, p=.002, r=.376, p=.007$ )
- Model comparison revealed that bracing explained more variance in daily FCR than IUS ( $R^2=.4975$  vs  $R^2=.4879$ ) and also had better model fit, shown by lower BIC (BIC bracing= 421.81, BIC IUS=472.63). Therefore bracing is the best predictor of daily change in fear of cancer recurrence

