

Perception matters: Stressful life events increase breast cancer risk.

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Abstract

OBJECTIVE:

The relationship between psychological stress and breast cancer risk is unclear. The present study sought to understand how stressfulness appraisal of salient Life Events (LEs) influences breast cancer risk.

METHODS:

A case-control design was used and included 664 female cases identified through the Cancer Surveillance Program of Orange County, CA and 203 female population-based controls. A LE questionnaire determined if events occurred prior to breast cancer diagnosis and if these events were considered to be stressful or not. Multivariate unconditional logistic regression was used to calculate ORs while adjusting for known breast cancer covariates.

RESULTS:

Cumulative adverse LEs perceived as stressful were associated with increased breast cancer risk in a dose response fashion (OR = 1.63, 95% CI = 1.00-2.66, $P_{\text{trend}} = 0.045$). Conversely, events perceived as non-stressful did not have a significant impact on breast cancer risk. Previous personal illness was directly related to increased breast cancer risk, whether perceived as stressful (OR = 2.84, 95% CI = 1.96-4.11) or non-stressful (OR = 3.47, 95% CI = 1.34-8.94). Abortion and relocation were observed to have a protective effect on breast cancer risk only when reported as stressful (OR = 0.54, 95% CI = 0.32-0.92; OR = 0.63, 95% CI = 0.43-0.93, respectively). Pre/Peri-menopausal women who were nulliparous or who had their first child at ≥ 30 years of age were especially prone to the effects of appraised stress on increased breast cancer risk.

CONCLUSIONS:

This study underscores the importance of stressfulness appraisal when determining the effect of major LEs on breast cancer risk. Our results support incorporating assessments of perceived stressfulness in future epidemiological investigation of this topic.

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