D6.2: Psychological Stress, Inflammation, and Women's Cancer: Biobehavioral Research

Author List:
Presenting Author: Na-Jin Park
Additional Author: Duck-Hee Kang, Marti Rice, Anne Turner-Henson, Charles Downs

Presenting Author: Na-Jin Park
Address: 1530 3rd Ave. S
Birmingham, Alabama 53294
United States
Ph: 205-996-7340
Fax:
Email: najinp@uab.edu
Institution: University of Alabama at Birmingham

Additional Author: Duck-Hee Kang
Address: 6901 Bertner Ave
Houston, Texas 77030
United States
Ph: 713-500-2052
Fax:
Email: duck-hee.kang@uth.tmc.edu
Institution: University of Texas-Houston

Additional Author: Marti Rice
Address: 1530 3rd Ave.S
Birmingham, Alabama 53294
United States
Ph: 205-975-7802
Fax:
Email: schauf@uab.edu
Institution: University of Alabama at Birmingham

Additional Author: Anne Turner-Henson
Address: 1530 3rd Ave.S
Birmingham, Alabama 53294
United States
Ph: 205-934-7533
Fax:
Email: turnhena@uab.edu
Institution: University of Alabama at Birmingham
Additional Author: Charles Downs

Address: PO Box 210203
Tucson, Arizona 85721
United States
Ph: 520-626-6154
Fax:
Email: cdowns@nursing.arizona.edu
Institution: University of Arizona

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Abstract:
Introduction: Psychological stress is a risk factor for cancer development and progression. Chronic inflammation appears to play an important role in this process and may serve as a mechanism underlying the role of psychological stress in cancer. Increased psychological stress increases the levels of pro-inflammatory proteins, such as interleukin (IL)-1, IL-6, tumor necrosis factor-alpha, and C-reactive protein, which, in turn, can alter the host’s susceptibility to cancer insults. Because characteristics of cancer differ among different types, we will focus on women’s cancer including breast, ovarian, and cervical cancer. The purposes of this paper are to review the current state of knowledge on the relationships between psychological stress and inflammation in cancer and to recommend future directions in this biobehavioral research area.

Method(s): Published research and review articles were searched through PubMed, using key words psychological stress, inflammation, and cancer. Included were clinical and epidemiological studies only in humans.

Results: Although there were some conflicting findings, generally, increased levels of psychological stress and pro-inflammatory markers were associated with increased risk for development and progression of breast, ovarian, and cervical cancers among women. However, different pro-inflammatory markers showed differential effects on different types of cancer. In addition, what effects psychological stress-induced inflammatory responses have on cancer has not been adequately investigated. Study findings need to be interpreted cautiously because of conceptual complexity in psychological stress, cross-sectional data, small sample sizes, and the limited scope of inflammatory responses.

Discussion & Conclusions: Psychological stress and inflammation is an excellent biobehavioral framework for cancer nursing research. Minimizing previous conceptual and methodological limitations, large prospective and longitudinal studies are needed incorporating a broad range of inflammatory markers. These studies will expand our understanding on stress, inflammation, and cancer.
Abstract History:
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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