

**Stony Brook University
The Graduate School**

Doctoral Defense Announcement

Abstract

**Physicians' Gender Bias in the Diagnosis, Treatment, and Interpretation
of Coronary Heart Disease Symptoms**

By

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Research shows a gender bias in the diagnosis and treatment of patients presenting Coronary Heart Disease (CHD) symptoms, with women referred for diagnostic testing and specialized cardiac care later in the course of the disease. The two main goals of the present research were to (1) identify and reconstitute experimentally conditions that are more likely to produce a gender bias in CHD assessment and (2) to understand the processes responsible for the bias. We hypothesized that in patients presenting CHD symptoms, the concurrent presentation of stress and anxiety symptoms may be more likely to produce a gender bias in CHD assessment than the presentation of CHD symptom alone. We proposed that when presented concurrently with stress, women's – but not men's – cardiac symptoms undergo a "a shift in meaning" and are perceived to have a psychogenic etiology. For women, the presence of stress may thus (incorrectly) deter from a CHD assessment while for men stress/anxiety may be viewed (correctly) as a risk factor and may augment the CHD assessment.

Three experimental studies were conducted. Participants in Study 1 (N=87 internists) and Study 2 (N=143 family physicians) were randomly assigned to read one of four versions of a vignette of a patient with a multitude of *textbook typical* symptoms and risk factors that would be identified as CHD by most medical professionals. Patient gender (male vs. female) and symptom context (with stress vs. without stress) were varied. The same design was used in Study 3 (N=142 family physicians); however, symptoms were modified to reflect an *atypical* presentation of CHD. After reading the vignettes, participants indicated their patient diagnoses, treatment recommendations, and symptom origin interpretation.

Results of all three studies supported our hypothesis. Study 1 and 2 results showed that when *typical* CHD symptoms were presented concurrently with stress/anxiety, women received significantly lower cardiac diagnoses and cardiologist referrals than men. No evidence of a bias was observed when CHD symptoms were presented without stressors. Study 2 also showed that CHD symptoms such as chest pain and shortness of breath were evaluated similarly (i.e., as organic) in men and women when presented without stressors and that the addition of stressors changed the meaning of symptoms (from organic to psychogenic) for female patients but not for male patients. Finally, Study 3 showed that in patients presenting *atypical* CHD symptoms in the context of stress women received fewer CHD diagnoses than men. Results suggest that women presenting CHD symptoms in the context of stress may not receive adequate cardiac care and suggest the need for educational initiatives to increase physicians' awareness of gender differences in symptom presentation.

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