

TITLE: The Long-Term Effect and Biophysical Mechanisms of Faith Effects on Cardiac Rehabilitation

FSU Principal Investigator: Amy L. Ai, MS, MA, MSW, PhD, FSU College of Social Work

PROJECT ABSTRACT:

This project is a follow-up of the NIH-funded large-sample clinical trial, designed by the PI. Cardiac surgery is a common life-altering event in older person as well as in many middle-aged individuals. Numerous studies have associated negative psychological factors (e.g., stress, negative affects or NA) with worse outcomes of cardiac surgery. Yet, faith researchers and positive psychologists have noted the protective role of faith factors (e.g., secure faith) and optimistic expectations (e.g., optimism) in health and wellbeing, including cardiac surgery outcomes. Evidence has linked certian neurohormone, immune/inflammation, and myocardial biomarkers with cardiac surgery outcomes, psychological stress, and optimistic expectations, respectively. These associations, however, have not been silmutaneously examined in patients who underwent open-heart surgery. The proposed interdisciplinary study aims at long-term postoperative outcomes of faith factors and optimistic expectations in these patients, counteracting risks of stress and myocardial biomarkers as well as NA, and potential physiological mechanisms underlying this mind-heart interaction. The study will capitalize on the preoperative psychosocial information and standardized surgical data gathered from a sample of 400+ cardiac surgery patients (recruited in 1999-2002 for a psychosocial study). Paired frozen blood samples are available for a few hundred patients. The current project enable us to (a) use blood samples to analyze stress and myocardial biomarkers, (b) employ multivariate analysis for the counter-risk, survival advantage of faith factors and optimistic expectations in long-term cardiac health, and (c) explore physiological mechanisms using the combined datasets. We hypothesize that certain faith factors would optimize long-term postoperative outcomes, counterbalancing the risk of selected biomarkers and NA, and affect some outcomes through certian preoperative psychophysiological pathways (e.g., optimism, levels of biomarkers). The present study will be built upon medical and psychosocial data from an NIH funded study and cutting-edge knowledge in several disciplines. The outcomes will have the potential to contribute substantive new knowledge to areas of faith research, psychoimmunology, positive psychology, cardiac physiology/surgery and.

Funding Sources:

John Templeton Foundation, \$334, 142_06/07-06/11
Hartford Geriatric Social Work Faculty Scholar Program, Gerontology Society of America, \$100,000 09/02-08/04

Co-Investigators:

Varies with co-authors at different universities, including those at the University of Michigan, in ongoing publication efforts

Community Collaborators:

None