

Kamarck, T.W., Schwartz, J.E., Janicki, D.L., Shiffman, S. & Raynor, D.A. (in press). Correspondence between laboratory and ambulatory measures of cardiovascular reactivity: A multilevel modeling approach. Psychophysiology.

Abstract

Multilevel modeling was used to examine the association between lab and field measures of cardiovascular reactivity (CVR). Healthy adults ($n = 335$) were administered lab measures of CVR along with 6 days of ambulatory blood pressure monitoring and electronic diary reports. We examined how *within-person* changes in ambulatory cardiovascular activity during periods of psychosocial demands may be moderated by *between-person* differences in CVR, after adjustment for the time-varying influences of posture, activity, and other effects. Compared with low reactors, high lab systolic blood pressure (SBP) reactors showed larger increases in SBP during periods of high Task Demand or low Decisional Control in daily life. Compared with low reactors, high diastolic blood pressure (DBP) reactors showed larger increases in ambulatory DBP during situations rated as both low in Control and high in Demand. Use of this multilevel modeling approach may enhance our ability to detect the association between CVR in the lab and in the natural environment, and to identify the circumstances under which it may be most clearly observed.