Analysis 2: God-Mediated Control, Stress, and Health

Introduction

God-mediated control refers to the belief that it is possible to work together with God to resolve problems that arise and to attain important goals and ambitions. Closely related notions of divine control and God locus of control have appeared in the literature, as well. The work that has been done so far suffers from two significant shortcomings. First, virtually all of the studies that have appeared so far have focused on the additive effects of God-mediated control. This is fine because it helps address the notion of working together with God to attain important goals and ambitions. But the literature on a generalized sense of control strongly suggests that feelings of control also help buffer the effects of stress on health. This suggests that God-mediated control may perform a similar stress-buffering function. Surprisingly, this has rarely been examined in the literature. Second, most of the studies that have been done to date have focused on psychological distress or psychological well-being while far fewer studies have been done with physical health. This is especially true with respect to biomarkers of health. The analyses that are proposed below are designed to address these limitations.

Measures

God-mediated control (I13-I15)

Stressful life events (G1-G12)

Church attendance (D17) (used as a control variable)

Private prayer (D19) (used as a control variable)

Usual demographic control variables (age, sex, education, marital status)

Biomarkers (data from blood spots as well as physical measures such as BMI, blood pressure and waist to hip ratio).

Analyses

There is a range of biomarker data in the LSHS Survey. In the analyses that follow, I will focus on one particular biomarker - BMI and the measure of obesity that is derived from it. I do this for two reasons. First, there is some evidence that stress is associated with greater weight gain, but the findings are mixed. There is also a separate literature which suggests that greater involvement in religion is also associated with more weight gain (e.g., the studies by Ken Ferraro). To the best of my knowledge, no one has put the two together. Following a classic stress-buffering model, I hypothesize that God-mediated effects will offset the effects of stress on BMI scores. Second, I want to focus on BMI and obesity because it allows me to address an issue I think we need to consider as we work with biomarkers that have explicit cut point scores. For example, a BMI of 30 or greater is typically considered to be the threshold of obesity. But if stress really "causes" weight gain, then contrasting the effects of stress on those with a BMI of

30 or greater with those who have a BMI of less than 30 will likely underestimate the proposed stress-buffering effects. Here's why. A person could have an initial BMI of 20, encounter significant stress, overeat, and end up with a BMI of 29. If the binary variable outcome is used as the sole outcome in the analyses, this increase will be missed because the case in question is still below a BMI of 30. This problem reflects the tension between a pure research emphasis and the need to adopt data in clinical treatment. So in the analyses I propose, I will look at both BMI and a binary variable that contrasts a BMI of less than 30 with a BMI of 30 or greater.

When the outcome is BMI scores, then an OLS regression approach will suffice. These analyses will be conducted with the following equation:

$$BMI = \alpha + \beta_1 STR + \beta_2 GMC + \beta_3 (STR \times GMC) + \Sigma C_i \beta_i \quad (2)$$

The symbols contained in Equation 2 are interpreted in the same way as the symbols that are provided in Equation 1. BMI denotes body mass index and GMC stands for God-mediated control.

The analyses will then be repeated using the binary obesity outcome. Logistic regression analysis will be used in this instance. There is no need to present an equation for the logistic regression analysis because it is quite similar to the OLS equation above.

Variations

As in the previous set of analyses, the models that are discussed in this section will be repeated using the full spectrum of stress measures in the LSHS. In addition, the analyses will be repeated using all of the biomarker data in the LSHS. Once again, since so little work has been done in this area, it is not possible to provide specific hypotheses regarding the use of different biomarker outcomes.