

Analysis 3: Gratitude to God, Stress, and Health

Introduction

The literature on feeling grateful to God is vastly underdeveloped. This is surprising because virtually every major faith tradition extols the virtue of feeling grateful to God. Some of the work I have done so far indicates that feeling grateful to God may offset the effects of stress on health and well-being. But there are a number of other ways to configure the interface between stress, gratitude to God, and health. To the best of my knowledge, no one has undertaken a comprehensive examination of these issues. The purpose of the analyses that are described below is to address this gap in the literature.

Measures

Feeling grateful to God (F14-F15)

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)

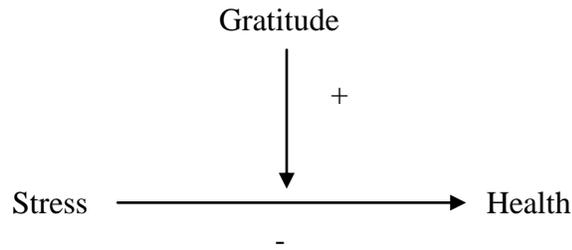
Biomarkers (data from blood spots as well as physical measures such as BMI, blood pressure and waist to hip ratio).

Analyses

The scope of what I would like to investigate is broad. So, of necessity, the discussion of the analyses that follow is somewhat lengthy. I propose to look at four different models that provide different ways of configuring the interface between stress, feeling grateful to God, and health. It should be emphasized at the outset that these models are not mutually exclusive and more than one may be valid. We may want to use this data analysis strategy with other indicators of religion in the LSHS survey.

Model 1. Moderator Model

The model that is presented below specifies that there is a statistical interaction effect between stress and gratitude to God on health. According to this model, high levels of stress tend to erode good health. However, the effect of stress on health depends upon the amount of gratitude that a person feels toward God. As the level of gratitude increases, the effects of stress on health become progressively weaker. One of the key characteristics of this conceptual scheme is that gratitude to God is not influenced by the amount of stress that is present. Moreover, fortitude has no effect on health in the absence of stress.



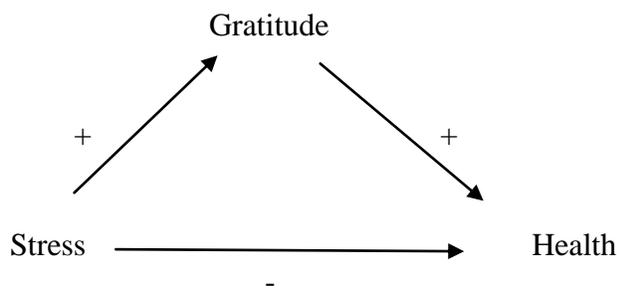
The proposed statistical interaction will be evaluated ordinary least squares regression (OLS). The following equation will be used to estimate Model 1.

$$\text{Health} = \alpha + \beta_1 \text{Stress} + \beta_2 \text{Gratitude} + \beta_3 (\text{Stress X Gratitude}) + \sum \beta_i C_i \quad (3)$$

In Equation 1, α is the intercept, the β_i are regression coefficients, and the C_i denote the effects of control variables (i.e., age, sex, education, marital status, church attendance, and private prayer). Church attendance and private prayer are included in the model in order to control for the influence of religious involvement. The proposed interaction is tested by including the multiplicative term in the model (Stress X Gratitude).

Model 2. Suppressor Model

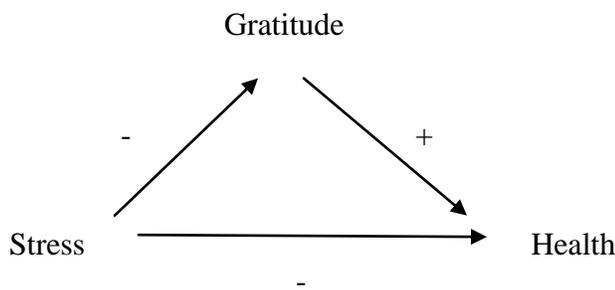
The main difference between the following model and the model that is provided above has to do with the relationship between stress and gratitude. In the scheme below, gratitude is stress responsive. This means that as the level of stress rises, so does the amount of gratitude. This specification is consistent with the notion that people often find strength in the face of adversity and this realization is likely to make them feel more grateful to God. This model is called a suppressor model for the following reason. In this scheme, stress tends to erode health. However, these noxious effects are offset or suppressed because stress increases gratitude and gratitude, in turn, promotes better health (i.e., the negative direct effect of stress on health is suppressed by the positive indirect effect of gratitude on health).



Model 2 will be evaluated within a latent variable modeling framework with the LISREL 8.80 statistical software program. In addition to the constructs in Model 2, this latent variable model will also contain the control measures identified above.

Model 3. A Resource Erosion Model

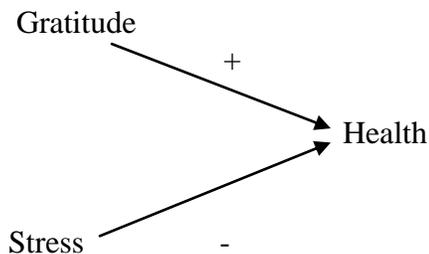
In contrast to the previous model, this specification suggests that instead of finding growth in the face of adversity, stress may actually erode the very resources that are needed for coping. This perspective is consistent with the notion that people may see the stressors that arise in their lives as being caused by God. If this is the case, they are likely to feel less grateful to Him. In the model below, the negative direct effect of stress on health is exacerbated by the negative indirect effect of stress that operates through gratitude.



Model 3 will be estimated within a latent variable modeling framework.

Model 4. Distress Deterrent Model

The model provided below assumes that feeling grateful to God and stress are completely independent. This perspective is consistent with the notion that gratitude may be a trait-like characteristic. In this instance, gratitude bolsters health while stress diminishes health. Moreover, according to this model, the benefits of feeling grateful to God will accrue regardless of whether stress is present or not.



Variations

As in the previous 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. And 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.