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Church Attendance and Intrinsic Religiosity Predict a Lower Likelihood of Hypertension in 18 to 60 Year Olds

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Background and Objectives

Religiosity has been shown to predict various health outcomes, with greater religiosity predicting better health and less disease. One common health measure is blood pressure. Consistently elevated blood pressure, or specifically hypertension, is predictive of heart disease and can result in heart attack or stroke.

- Determine whether Intrinsic Religiosity (IR) and Religious Service Attendance (Attendance) predict self-reported hypertension in college students as found in older people
- If such a relationship is found, determine whether IR and Attendance account for variability over and above age, gender, and stress level.



Method

Participants and Procedure

A sample of 917 college students participated in an online survey during spring 2013 or fall 2014.

| Sample Characteristics | | |
|---|--------------|---------|
| Characteristic | Number (%) | Range |
| Age—Mean (SD) | 20.81 (4.80) | 18 - 60 |
| Stress—Mean (SD) | 18.23 (6.84) | 0 - 38 |
| Gender | | |
| Female | 625 (68.2) | |
| Male | 290 (31.8) | |
| Intrinsic Religiosity | | |
| High (4 or 5) | 332 (36.2) | |
| Low (1 – 3) | 585 (63.8) | |
| Frequency of religious service attendance | | |
| Once/week or more | 320 (34.9) | |
| Less than once/week | 597 (65.1) | |
| Hypertension | | |
| No | 860 (93.8) | |
| Yes | 57 (6.2) | |

Measures

Covariates:

Demographic Characteristics

Age (<21; 21-30; 31-40; >40)
Gender (Female, Male)

Perceived Stress Scale (Stress) (Total Score)

Predictors:

Intrinsic Religiosity (IR)

"I try hard to carry my religious beliefs over into all my other dealings in life" (1 - Strongly Agree to 4 -Strongly Disagree)

Frequency of Church Attendance (Attendance)

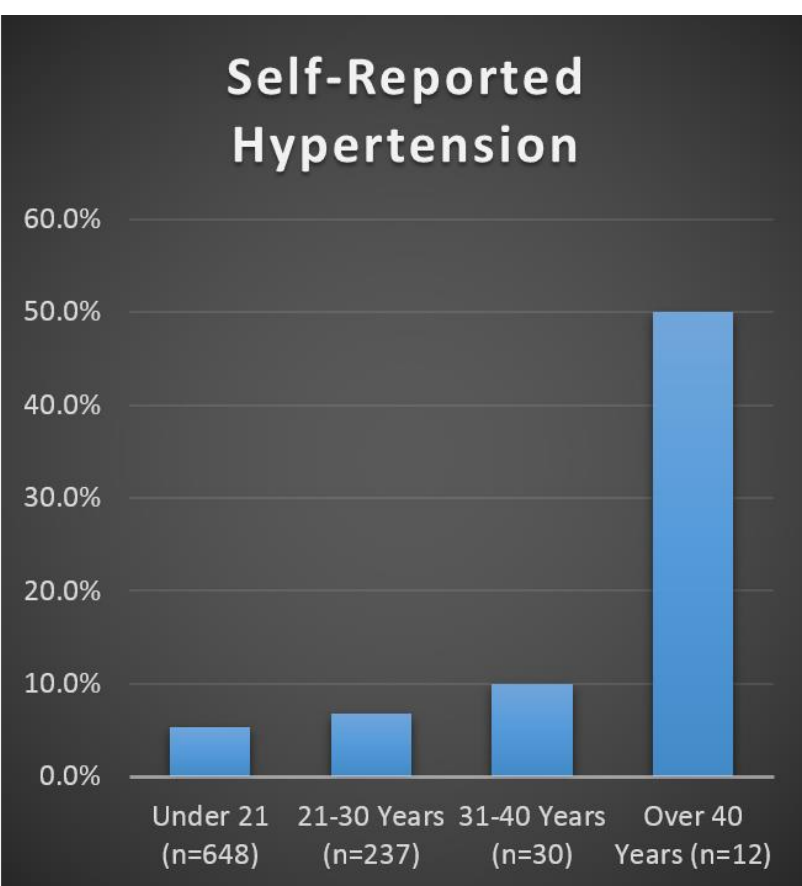
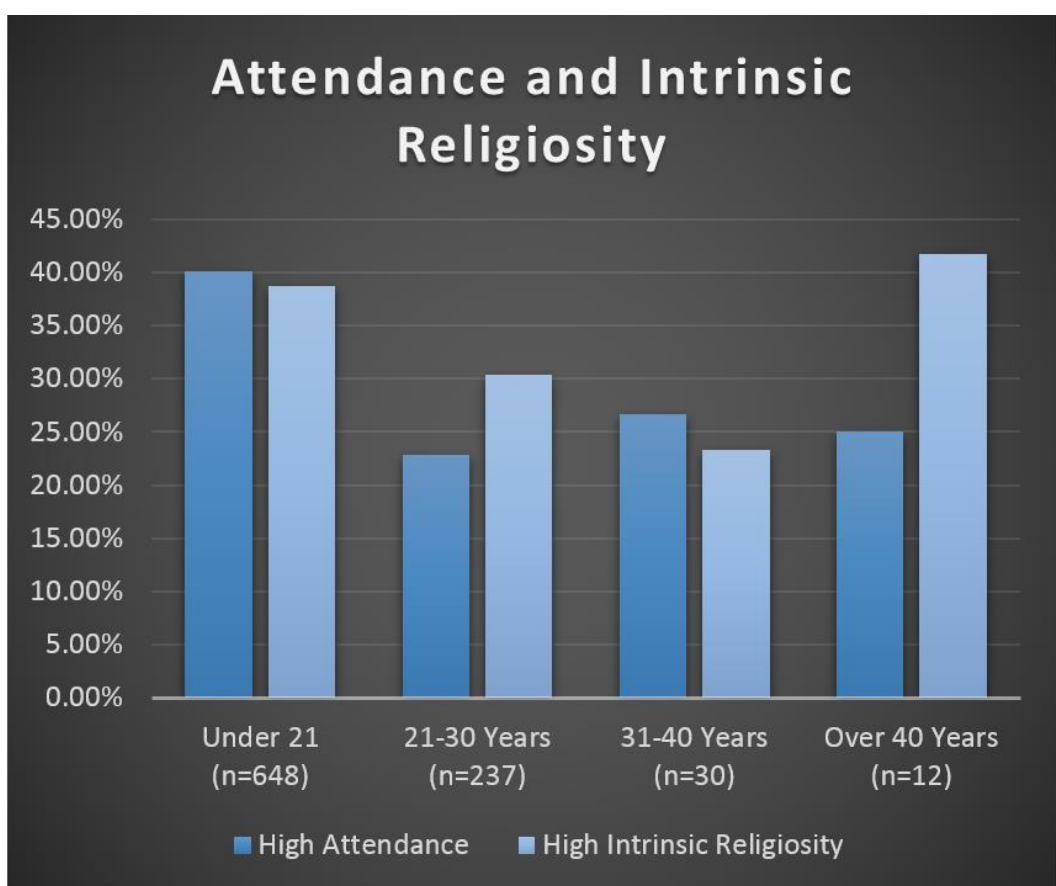
"How often do you go to religious services?" (1 time/week or more vs. Less than once per week)

Criterion:

Self-Reported Hypertension Diagnosis (Hypertension)

"Have you ever been told by a doctor or other health professional that you had hypertension, also called high blood pressure?" (Yes, No)

Results



- The youngest group attended more often (χ^2 (1, $n=921$) = 24.14, $p < .001$), but age group did not predict Intrinsic Religiosity (χ^2 (1, $n=921$) = 7.64, $p = .054$).
- Hypertension was predicted by Attendance (χ^2 (1, $n=921$) = 6.32, $p = .021$) and Intrinsic Religiosity (χ^2 (1, $n=921$) = 4.57, $p = .033$).

Logistic Regression Model Estimating Effects of Intrinsic Religiosity on Self-Reported Hypertension (n = 917)

| Variable | B | SE | p | OR | 95% C.I. |
|----------------------------|--------|------|-------|-------|-------------|
| Age | | | | | |
| <20 years (referent) | | | | | |
| 21-30 years | 0.048 | 0.33 | .883 | 1.05 | 0.55-2.00 |
| 31-40 years | 0.515 | 0.64 | .421 | 1.67 | 0.48-5.86 |
| >40 years | 3.029 | 0.63 | <.001 | 20.68 | 6.08-70.36 |
| Gender | 0.148 | 0.30 | .244 | 1.16 | 0.64 – 2.09 |
| Stress | -0.019 | 0.02 | .833 | 0.98 | 0.94 – 1.02 |
| High Intrinsic Religiosity | -0.750 | 0.34 | .027 | 0.47 | 0.23 – 0.92 |
| (Constant) | -2.339 | 0.47 | <.001 | | |

Model χ^2 = 25.70, df = 6, $p < .001$

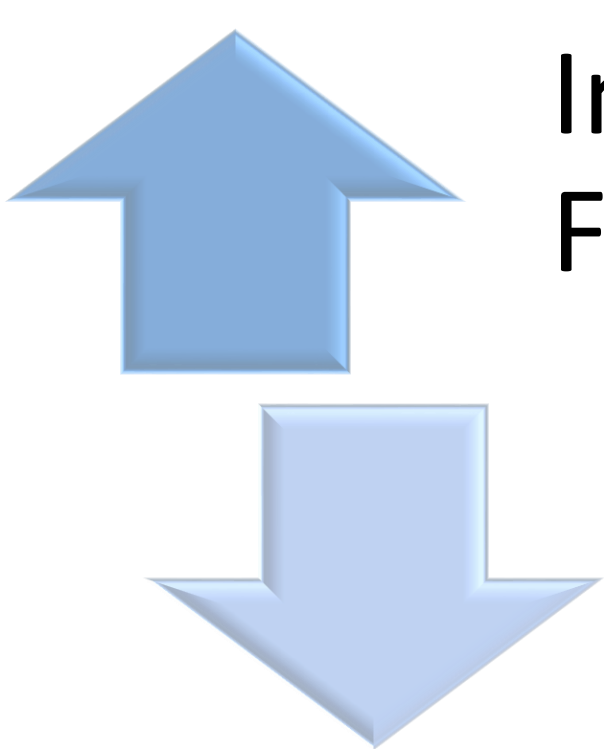
Logistic Regression Model Estimating Effects of Religious Service Attendance on Self-Reported Hypertension (n = 917)

| Variable | B | SE | p | OR | 95% C.I. |
|----------------------|--------|------|-------|-------|------------|
| Age | | | | | |
| <20 years (referent) | | | | | |
| 21-30 years | -0.012 | 0.33 | .971 | 0.99 | 0.52-1.89 |
| 31-40 years | 0.518 | 0.64 | .419 | 1.68 | 0.48-5.90 |
| >40 years | 2.289 | 0.62 | <.001 | 17.93 | 5.32-60.48 |
| Gender | 0.189 | 0.40 | .528 | 1.21 | 0.67-2.16 |
| Stress | -0.016 | 0.02 | .450 | 0.98 | 0.94-1.03 |
| Frequent Attendance | -0.831 | 0.35 | .019 | 0.22 | 0.22-0.87 |
| (Constant) | -2.388 | 0.46 | <.001 | | |

Model χ^2 = 26.58, df = 6, $p < .001$

Conclusions

- High intrinsic religiosity predicts a lower incidence of hypertension when controlling for age, gender, and stress.
- Attending church once per week or more predicts a lower incidence of hypertension when controlling for age, gender, and stress.



Intrinsic Religiosity OR
Frequent Attendance

Hypertension

Bell, C. N., Bowie, J. V., & Thorpe, R. J. (2012). The interrelationship between hypertension and blood pressure, attendance at religious services, and race/ethnicity. *Journal of Religion and Health*, 51(2), 310-322. doi:10.1007/s10943-010-9346-7

Hooker, S. A., Masters, K. S., & Carey, K. B. (2014). Multidimensional assessment of religiousness/spirituality and health behaviors in college students. *International Journal for the Psychology of Religion*, 24(3), 228-240. doi:10.1080/10508619.2013.808870

Mishra, S. K., Togneri, E., Tripathi, B., & Trikamji, B. (2015). Spirituality and religiosity and its role in health and diseases. *Journal of Religion and Health*, doi:10.1007/s10943-015-0100-z