# Stress as a Mediator of the Association between Forgiveness and Health-Related Variables



## INTRODUCTION

Empirical support for the association between forgiveness and physical health is growing (Webb, Toussaint, & Conway-Williams, in press).

Experts have suggested that there is a salutary relationship between forgiveness and health and that, likewise, stress may be a key factor from cognitive, emotional, and physiological perspectives (Maton, 1989; Worthington, Witvliet, Pietrini, & Miller, 2007).

However, not all students who endorse higher levels of stress will endorse increased physical health symptoms, perhaps due to the protective factors of forgiveness.

Although the psychological study of forgiveness is burgeoning, little work has been done to assess the nuances of stress in the context of the forgiveness-health relationship

<u>Purpose of the Study</u>: To help improve the understanding of the relationship between forgiveness, stress, and physical health.

General Hypothesis: Stress will mediate the relationship between forgiveness and physical health, such that higher levels of forgiveness will be associated with lowers levels of stress, which, in turn, will be associated with better health related variables.

#### METHODS

Design & Participants:

- Cross-Sectional
- Undergraduate college students (n=363)
- Q = 74.38%; *n* = 270
- Caucasian = 88.15%; n = 320
- $M_{aae} = 22.11; SD = 6.15$

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#### METHODS (con't)

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<i>asures</i> : nographic variables ., gender, age, education, ethni atus)	city, marital	<ul> <li>Only Forget health – s</li> <li>This relat</li> <li>For HALT, th</li> </ul>	
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<b>sical Health Questionnaire</b> hat, Kelloway, & Desmarais, 2005)		In sum, the symptoms \	
oression Anxiety Stress Scales ovibond, S. H. & Lovibond, P. F., 1995)			
Itidimensional Measurement o gion & Spirituality – Forgivenes orm etzer Institute, 1999) T ebb & Brewer, 2010) -1.47**** $a_1$ 22 .52 -1.46****		Stress b <sub>1</sub> .2	
a <sub>2</sub> 23 .53			
	74**** c <sub>1</sub> 15 11		
Forgiveness of Self	40**	-3.26***	
Forgiveness of Others Feeling Forgiven by God	<i>c</i> <sub>1</sub> '10 01	c <sub>2</sub> 31 -1.02	
		-1.32 c <sub>2</sub> ′00 -1.73	

Figure 1: Effect of Forgiveness on Health Symptoms as Stress  $p < .10; p \le .05; p \le .01; p \le .001; p \le .001; p \le .0001$ 

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#### RESULTS

I physical health – somatic symptoms, the full significant ( $R^2 = .31^{****}$ ).

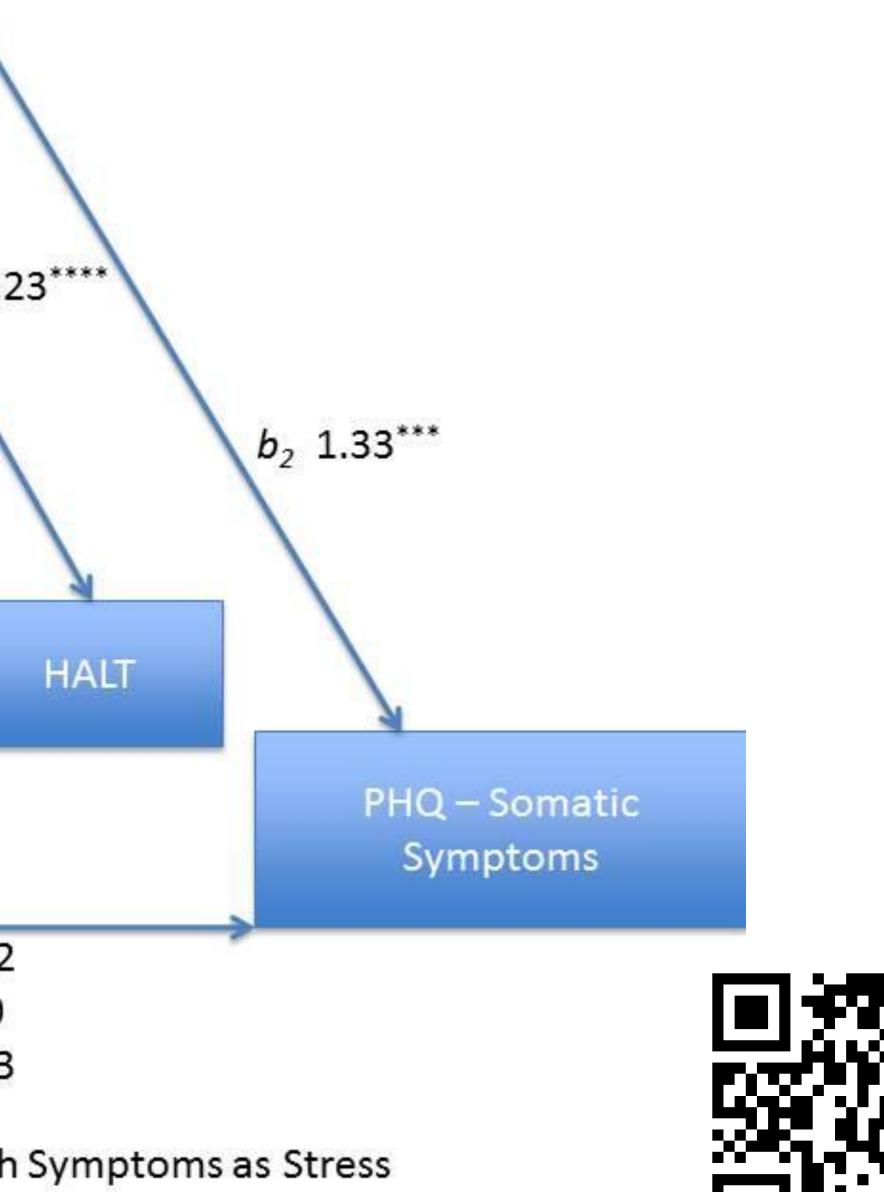
rgiveness of Self was associated with physical somatic symptoms.

ationship was fully mediated by stress.

the full model was significant ( $R^2 = .32^{****}$ ).

rgiveness of Self was associated with HALT. ationship was partially mediated by stress.

e association of FS with physical health was both direct and indirect, through stress.



Consistent with prior theory and research (Toussaint & Webb, 2005; Worthington, et al., 2007), our findings suggest that stress may play a role in the relationship between forgiveness and health.

However, much of the prior work has been in the context of forgiveness of others, only; in consideration of our findings, it appears that when multiple dimensions of forgiveness are measured, forgiveness of others may not be associated with health.

The association between higher levels of FS and lowers levels of stress may contribute to fewer health-related symptoms by facilitating a positive outlook, lowering anxiety and depression, supporting the ability to cope, and future orientation (Zaleski, Levey-Thors, & Schiaffino, 1998).

Furthermore, this forgiveness-stress relationship may lessen the likelihood of health compromising behaviors, such as alcohol and drug use (Webb, Hirsch, & Toussiant, 2011; Zaleski, et al., 2007)

Corporate.

evidence for emotional versus decisional forgiveness, dispositional forgivingness, and reduced unforgiveness. Journal of Behavioral Medicine, 30(4), 291-302. doi: 10.1007/s10865-007-9105-8 Caleski, E. H., Levey-Thors, C., & Schiaffino, K. M. (1998). Coping mechanisms, stress, social support, and health problems in college students. Applied Developmental Science, 2(3), 127-137. doi: 10.1207/s1532480xads0203 2

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#### DISCUSSION

### REFERENCES

Connors, G. J., Tonigan, J. S., & Miller, W. R. (1996). A measure of religious background and behavior for use in behavior change research. *Psychology of Addictive Behaviors, 10*, 90-96. Fetzer Institute. (1999). Multidimensional measurement of religiousness/spirituality for use in health research: A report of the Fetzer Institute/National Institute on Aging working group, with additional psychometric data. October. Kalamazoo, MI:

Lovibond, S. H., & Lovibond, P. F. (1995). Manual for the Depression Anxiety Stress Scales (2nd ed.). Sydney: Psychology Foundation. <u>http://www2.psy.unsw.edu.au/groups/dass</u>

Maton, K. I. (1989). The stress-buffering role of spiritual support: Cross-sectional and prospective investigations. Journal For The Scientific Study Of Religion, 28(3), 310-323. doi:10.2307/1386742

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879-891. doi: 10.3758/brm.40.3.879 Schat, A. C. H., Kelloway, E. K., & Desmarais, S. (2005). The Physical Health Questionnaire(PHQ): Construct validation of a self-

report scale of somatic symptoms. Journal of Occupational Health Psychology, 10(4), 363-381. Toussaint, L., & Webb, J. R. (2005). Theoretical and empirical connections between forgiveness, mental health, and well-being. In E. L. Worthington, Jr. (Ed.), Handbook of forgiveness (pp. 349-362). NY: Routledge.

Webb, J. R., & Brewer, K. (2010). Forgiveness and college student drinking in Southern Appalachia. Journal of Substance Use, 15(6), 417-433. doi: 10.3109/14659891003706373 Webb, J. R., Hirsch, J. K., & Toussaint, L. (2011). Forgiveness and alcohol problems: A review of the literature and a call for

intervention-based research. *Alcoholism Treatment Quarterly, 29*(3), 245-273. doi: 10.1080/07347324.2011.585922 Webb, J. R., Toussaint, L., & Conway-Williams, E. (in press). Forgiveness and health: Psycho-spiritual integration and the promotion of better healthcare. Journal of Health Care Chaplaincy.

Webb, J. R., Toussaint, L., Kalpakjian, C. Z., & Tate, D. G. (2010). Forgiveness and health-related outcomes among people with spinal cord injury. *Disability and Rehabilitation, 32*(5), 360-366. doi: 10.3109/09638280903166360 Worthington, E. L., Jr., Witvliet, C. V. O., Pietrini, P., & Miller, A. J. (2007). Forgiveness, health, and well-being: A review of