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Religiosity, stress and psychological distress: no evidence for an association among undergraduate students

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Abstract

The relationship between religion and mental and physical health has received substantial scientific interest. It has been suggested that indicators of religiosity are inversely associated with aspects of psychological distress. The aim of the present study was to investigate further the relationship between religiosity, stress and psychological distress. One hundred and seventy-seven undergraduate students completed the Francis Scale of Attitude Towards Christianity (FSAC), the Stress Arousal Checklist, the General Health Questionnaire (GHQ-30) and the Multi-dimensional Scale of Perceived Social Support. No association was found between scores on the FSAC, the measure of stress, social support or the GHQ-30. Stress and social support were the only variables significantly associated with scores on the GHQ-30. The results of the present study provide evidence, among an undergraduate sample, that religiosity is not associated with psychological distress.

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1. Introduction

The relationship between religion and mental and physical health has received substantial scientific interest (Bergin, 1983; Bergin, Masters, & Richards, 1987; Levin & Chatters, 1998; McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000; Maltby & Lewis, 1997; Maltby, Lewis, & Day, 1999; Thoresen, 1999; Williams, Larson, Buckler, Heckman, & Pyle, 1991). Several reviews have concluded that more often than not, indicators of religiosity are inversely associated with

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aspects of psychological ill-health (Bergin, 1983; Williams et al., 1991). Furthermore in a recent meta-analysis, McCullough et al. (2000) examined the association between a measure of religious involvement and all-cause mortality. They found religious involvement to be significantly associated with mortality. That is, their data indicated that individuals low in religious involvement were more likely to be dead at follow-up than individuals high in religious involvement. However, other researchers have failed to corroborate these findings and have concluded that the data thus far are inconsistent and mixed (e.g. Batson, Schoenrade, & Ventis, 1993; Ferraro & Albrecht-Jensen, 1991; Sloan & Bagiella, 2001). One of the mechanisms put forward to explain this association is the buffering hypothesis—religiosity may buffer the impact of stress on psychological and physiological health (Kendler, Gardner, & Prescott, 1997; Krause, 1998; Pargament, 1997). This notion is consistent with the broader stress literature (e.g. Cox & Ferguson, 1991; Lazarus & Folkman, 1984, O'Connor, O'Connor, White, & Bundred, 2000) and also with research conducted by others within the psychology of religion field. For example, Pargament (1997) argues that religion modifies aspects of the stress-appraisal process. Religiosity may well be better viewed in terms of a religious coping model, where religion can have emotion-focussed and problem-focussed coping properties. In other words, individuals high in religious orientation exhibit lower levels of psychological distress. It has also been suggested that the religiosity–health relationship may actually be confounded with general social support. Despite this, there has been a relative dearth of research in this specific area (Thoresen, 1999). Therefore, the aim of the present study was to investigate further the interrelationships between stress, religiosity, social support and psychological distress.

2. Method

2.1. Sample

One hundred and seventy-seven full-time undergraduate students (75 males and 102 females) from the University of Leeds, England, and University of Strathclyde, Scotland aged between 17 and 44 years (mean = 20.5; SD = 3.65) took part in the study. Some demographic variables were also collected: (1) whether the participant smoked cigarettes, if so, how many per day; and (2) whether the participant drinks alcohol (never, once per week, >3 times per week, daily).

2.2. Measures

All respondents completed the following questionnaire measures

2.3. Religiosity

Religiosity was measured using the 7-item version of the Francis Scale of Attitude Towards Christianity (FSAC; Francis, 1993; Lewis, Shevlin, Lloyd, & Adamson, 1998). Items included 'God helps me to lead a better life', 'Prayer helps me a lot' etc. Responses are scored on 5-point Likert scales extending from 'agree strongly' to 'disagree strongly'. Higher scores indicate a more positive attitude towards Christianity.

2.4. Stress and arousal

Stress and arousal were measured using the Stress and Arousal Checklist (Gotts & Cox, 1988; MacKay, Cox, Burrows, & Lazzarini, 1978). The checklist consists of 30 adjectives (18 'stress' items & 12 'arousal' items) which are rated from 'definitely feel' to 'definitely do not feel' at this moment in time. Adjectives included 'tense', 'uptight', 'distressed', 'active', 'energetic' etc. Higher scores indicate higher level of stress and arousal.

2.5. Psychological distress

Psychological distress was assessed using the 30-item General Health Questionnaire (GHQ; Goldberg, 1978). Items included 'been able to concentrate on whatever you're doing' and 'been nervous and strung-up all the time'. Each item is scored on a 4-point scale from 'better than usual' extending to 'much less than usual'. Higher scores indicate poorer general health.

2.6. Social support

Social support was assessed using the 12-item Multi-Dimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988). This measure has three sub-scales: family support, friends' support and significant other support. Items include 'my family really tries to help me', 'I can count on my friends when things go wrong', and 'there is a special person who is around when I am in need'. Higher scores indicate greater social support.

3. Results

For both correlational analyses and *t*-tests the significance level of $P < 0.01$ was set to reduce the likelihood of type 1 errors due to multiple comparisons. Table 1 shows the mean scores for all the variables by sex and Cronbach alpha (Cronbach, 1951) statistics for each of the study variables.

Table 1
Alpha coefficients and mean scores (SD in parentheses) for all variables by sex

	α	Men	Women	<i>t</i>
Religiosity	0.96	17.68 (8.9)	20.87 (8.4)	2.45 ^c
Stress	0.85	5.48 (5.5)	5.51 (5.2)	0.04
Arousal	0.81	5.84 (3.1)	5.94 (3.2)	0.21
GHQ	0.93	30.01 (13.1)	31.94 (13.5)	0.95
Family support	0.90	19.67 (5.3)	23.30 (4.8)	4.77 ^b
Friends' support	0.91	38.11 (6.8)	41.74 (7.0)	3.46 ^a
Significant other	0.93	21.72 (5.0)	24.02 (4.8)	3.07 ^a

^a $P < 0.05$.

^b $P < 0.01$.

^c $P < 0.001$.

Table 2
Pearson's Product Moment correlations between all study variables^a

	1	2	3	4	5	6	7
1. Religiosity	–	–0.13	0.16	–0.23	0.16	–0.03	0.06
2. Stress	–0.03	–	–0.13	0.74**	–0.19	–0.32*	–0.24
3. Arousal	–0.05	–0.32*	–	–0.21	0.25	0.13	0.15
4. GHQ	–0.06	0.65**	–0.45**	–	–0.14	–0.31*	–0.26
5. Family support	–0.00	–0.16	0.13	–0.13	–	0.27	0.19
6. Friends' support	0.24	–0.42**	0.20	–0.36**	0.45**	–	0.88**
7. Significant other	0.22	–0.30*	0.16	–0.29*	0.45**	0.87**	–

* $P < 0.01$. ** $P < 0.001$.

^a Men above diagonal ($N = 75$); women below diagonal ($N = 102$).

Internal consistency for all measures was found to be satisfactory and within acceptable boundaries (Cortina, 1993). Independent samples t -tests found females scored significantly higher on Family Support, Friends' Support and Significant Other Support than males. Females also reported higher scores on the FSAC, although this difference failed to reach statistical significance ($P = 0.015$).

Given the significant gender differences found on a number of measures, correlational analyses for males and females were conducted separately. Table 2 shows correlations for all study variables by gender. No significant associations were found between the FSAC and any of the study variables among males and females. For both males and females, stress scores were highly positively correlated with the GHQ scores ($r = 0.74$, $r = 0.65$; respectively), indicating that higher stress levels are associated with greater psychological distress. Arousal was negatively associated with the GHQ scores in females only ($r = -0.32$), suggesting that high levels of arousal are associated with low psychological distress. For females, both friends' support ($r = -0.36$) and significant other support ($r = -0.29$) were significantly correlated with psychological distress, indicating higher support associated with lower distress. For males, only friends' support ($r = -0.31$) was significantly associated with psychological distress. A similar pattern was observed for stress levels, with only friends support ($r = -0.32$) emerging as important for males, and both significant other ($r = -0.30$) and friends ($r = -0.42$) for females.

Notably, the two behavioural variables (smoking and alcohol consumption) were not related to self-reported stress or arousal. Instead, for males a significant positive association was found between the number of cigarettes smoked per day and GHQ scores ($r = 0.30$). For females, religiosity was found to be significantly inversely associated with alcohol consumption ($r = -0.26$).

4. Discussion

The results of this study do not support research that religiosity is associated with psychological distress. Contrary to Seybold and Hill (2001) we did not find evidence that religion (and spirituality)

had a beneficial effect on mental and physical health status. These data also fail to provide evidence for the notion that religiosity buffers the impact of stress on psychological distress among undergraduate students. Instead they further endorse the robustness of the stress–social support–psychological distress pathway.

These findings are consistent with three studies conducted by Lewis et al. (Lewis, Joseph, & Noble, 1996; Lewis, Lanigan, Joseph, & de Fockert, 1997; Lewis, Maltby, & Burkinshaw, 2000). They reported an absence of an association between the FSAC (as utilised in the present study) and measures of psychological well-being. The first study failed to find an association between FSAC scores and a measure of life satisfaction. Similarly, the second and third studies found no association between FSAC scores and a measure of happiness.

In addition, the data presented here add further weight to the recent work conducted by Maltby et al. (1999) who suggest that the important mechanism moderating the relationship between religiosity and psychological well-being is frequency of personal religious practice. They found that frequency of personal prayer (and not a measure of religious orientation) was the dominant measure explaining significant amounts of the variance in depressive symptoms, trait anxiety and self-esteem. Therefore, it is reasonable to conjecture that the absence of an association between religiosity and psychological distress in the present study may be accounted for by the lack of sensitivity of the religion measure employed. If this is indeed the case, these data are noteworthy as they highlight the beneficial impact of personal religious practice rather than religiosity per se. This view is also consistent with the work of Pargament (1997), who argues that religiosity should not be considered a simple dimension. Instead, it should also include religious acts such as personal prayer and church attendance—in this way religion permeates all aspects of life. For example, there is evidence that church attendance buffers against suicide (O'Connor & Sheehy, 2000).

Within the general stress–health literature, it is important to bear in mind that measures of psychological constructs may not always be as applicable and apposite within a student sample as they are to a general population. In our student sample, the males reported low levels of religiosity compared to the female sample and to that reported elsewhere (e.g. Lewis et al., 1998). Therefore, it may be the 'irreligious' nature of the present sample, which accounts for the absence of an association between religiosity, stress and psychological distress. Similarly, low levels of alcohol consumption and smoking were reported by both males and females—this may reflect a change in attitudes towards both smoking and drinking as opposed to a reduction in the experience of student stress. Replication of the present findings is required in order to investigate these propositions further.

Koenig, Hoys, George, Blazer, Larson, and Landerman (1997) examined the relationship between religion, physical health, social support and depressive symptoms in an elderly sample. They found when religiosity was considered as a single construct it was correlated with physical health, but not with depression. When split into components, frequent church attenders had significantly better physical health and were also half as likely to be depressed. Thus highlighting the importance of age factors, the nature of the sample (i.e. undergraduate sample or elderly sample) and investigating all aspects of religiosity when examining the relationship between religion and psychological distress. Future research should investigate further the potential moderating role of various different personal religious practices on psychological distress in a range of populations.

References

- Batson, C. D., Schoenrade, P., & Ventis, W. L. (1993). *Religion and the individual: a social psychological perspective*. London: Oxford University Press.
- Bergin, A. E. (1983). Religiosity and psychological wellbeing: a critical re-evaluation and meta-analysis. *Professional Psychology: Research and Practice*, *14*, 170–184.
- Bergin, A. E., Masters, K. S., & Richards, P. S. (1987). Religiousness and psychological well-being re-considered: a study of an intrinsically religious sample. *Journal of Counselling Psychiatry*, *34*, 197–204.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*, 297–334.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Social Psychology*, *78*, 98–104.
- Cox, T., & Ferguson, E. (1991). Individual differences, stress and coping. In C. L. Cooper, & R. Payne (Eds.), *Personality and stress: individual differences in the stress process* (pp. 7–30). Chichester: Wiley & Sons.
- Ferraro, K. F., & Albrecht-Jensen, C. M. (1991). Does religion influence adult health? *Journal of the Scientific Study of Religion*, *30*, 193–202.
- Francis, L. J. (1993). Reliability and validity of a short scale of attitude towards Christianity among adults. *Psychological Reports*, *72*, 615–618.
- Goldberg, D. (1978). *Manual of the General Health Questionnaire*. Windsor: NFER Publishing Company.
- Gotts, G., & Cox, T. (1988). *Stress and arousal checklist: a manual for its administration, scoring and interpretation*. Australia: Swinburne Press.
- Kendler, K. S., Gardner, C. O., & Prescott, C. A. (1997). Religion, psychopathy and substance use and abuse: a multimeasure genetic-epidemiologic study. *American Journal of Psychiatry*, *154*, 322–329.
- Koenig, H. G., Hays, J. C., George, L. K., Blazer, D. G., Larson, D. B., & Landerman, L. R. (1997). Modeling the cross-sectional relationships between religion, physical health, social support and depressive symptoms. *American Journal of Geriatric Psychiatry*, *5*, 131–144.
- Krause, N. (1998). Stressors in highly valued roles, religious coping and mortality. *Psychology and Aging*, *13*, 242–255.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer-Verlag.
- Levin, J. S., & Chatters, L. M. (1998). Religion, health and psychological well-being in older adults. *Journal of Aging and Health*, *10*, 504–531.
- Lewis, C. A., Joseph, S., & Noble, K. E. (1996). Is religiosity associated with life satisfaction? *Psychological Reports*, *79*, 429–430.
- Lewis, C. A., Lanigan, C., Joseph, S., & de Fockert, J. (1997). Religiosity and happiness: no evidence for an association among undergraduates. *Personality and Individual Differences*, *22*, 119–121.
- Lewis, C. A., Maltby, J., & Burkinshaw, S. (2000). Religion and happiness: still no association. *Journal of Beliefs and Values*, *21*, 233–236.
- Lewis, C. A., Shevlin, M., Lloyd, N. S. V., & Adamson, G. (1998). The Francis Scale of Attitude Towards Christianity (Short Scale): exploratory and confirmatory factor analysis among english students. *Journal of Social Behavior and Personality*, *13*, 167–175.
- MacKay, C. J., Cox, T., Burrows, G., & Lazzarini, A. J. (1978). An inventory for the measurement of self-reported stress and arousal. *British Journal of Social and Clinical Psychology*, *17*, 283–284.
- McCullough, M. E., Hoyt, W. T., Larson, D. B., Koenig, H. G., & Thoresen, C. (2000). Religious involvement and mortality: a meta-analytic review. *Health Psychology*, *19*, 211–222.
- Maltby, J., & Lewis, C. A. (1997). The reliability and validity of a short scale of attitude towards Christianity among U.S.A., English, Republic of Ireland, and Northern Ireland adults. *Personality and Individual Differences*, *5*, 649–654.
- Maltby, J., Lewis, C. A., & Day, L. (1999). Religious orientation and psychological well-being: the role of the frequency of personal prayer. *British Journal of Health Psychology*, *4*, 363–378.
- O'Connor, D. B., O'Connor, R. C., White, B. L., & Bundred, P. E. (2000). The effect of job strain on British general practitioners' mental health. *Journal of Mental Health*, *9*, 637–654.
- O'Connor, R. C., & Sheehy, N. P. (2000). *Understanding suicidal behaviour*. Leicester: BPS Books.
- Pargament, K. I. (1997). *The psychology of religion and coping: theory, research and practice*. London: Guildhall Press.

- Seybold, K. S., & Hill, P. C. (2001). The role of religion and spirituality in mental and physical health. *Current Directions in Psychological Science, 10*, 21–24.
- Sloan, R., & Bagiella, E. (2001). Religion and health. *Health Psychology, 20*, 228.
- Thoresen, C. E. (1999). Spirituality and health: Is there a relationship? *Journal of Health Psychology, 4*, 291–300.
- Williams, D. R., Larson, D. B., Buckler, R. E., Heckman, R. C., & Pyle, C. M. (1991). Religion and psychological distress in a community sample. *Social Science and Medicine, 32*, 1257–1262.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multi-dimensional scale of perceived social support. *Journal of Personality Assessment, 52*, 30–41.