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OPTIMISM, RELIGIOSITY, AND NEUROTICISM: A CROSS-CULTURAL STUDY*

James W. Schutte† and Harmon M. Hosch

Department of Psychology, The University of Texas at El Paso, El Paso, TX 79968, U.S.A.

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Summary—This study examined the relationship among dispositional and situational optimism, cognitive religiosity, and neuroticism in a sample of Mexican-Americans, Anglo-Americans, and Mexican nationals. Participants ($N = 295$) completed the Life Orientation Test (LOT), the Revised Generalized Expectancy for Success Scale (GESS-R), the short-form N scale of the Eysenck Personality Questionnaire—Revised, and a measure of cognitive religiosity. Multiple regression tested a path model in which religiosity was hypothesized to predict optimism and both religiosity and optimism were hypothesized to predict neuroticism. Only in the Mexican-American sample did the model yield results consistent with predictions. Substantially different results appeared in the Anglo-American and Mexican national samples. Results are interpreted in terms of cultural differences.

INTRODUCTION

In the past decade optimism has been the subject of numerous studies, mostly aimed at examining the relationship between optimism and physical and mental health. Various researchers have suggested, and presented empirical support, that positive thinking and an interest and confidence in goal-setting can influence well-being. Scheier and Carver (1985) found that persons reporting high levels of optimism were less likely to complain of suffering from physical symptoms. Similar findings were reported by Ransom, Fisher and Terry (1992) in a study of 225 families in California. In this latter research parental optimism correlated positively with individual and overall family health and negatively with substance abuse, excessive alcohol consumption, and cigarette smoking. High levels of optimism have been found to be positively correlated with more successful treatment outcomes for heart disease, cancer, and in general surgery (Scheier & Carver, 1992). Optimism has also been found to contribute to lower anxiety levels in times of stress, as Aspinwall and Taylor (1992) found with entering college freshmen and Carver and Gaines (1987) encountered with women suffering from postpartum depression.

Religiosity has also been reported to be predictive of mental and physical health. Idler (1987) suggests that religion may influence well-being by encouraging healthy behavior, providing a social support network, and establishing a philosophical system with which persons may plan for the future and interpret life events. By way of empirical support, Ferraro and Albrecht-Jensen (1991) report that behavioral religiosity, including prayer and participation in organized religious activities, is predictive of better health in general. Levin and Markides (1985) report a negative correlation between self-rated religiosity and hypertension. Jensen, Jensen and Wiederhold (1993) found a negative relationship between depression and low self-esteem and religiosity.

Given the strength of association between these two personality variables and health, it would seem useful to examine to what degree the two are related, as well as seek other characteristics with which they may correlate. To the extent that both characteristics seem predictive of well-being, and if one may consider that both provide the individual with a more hopeful, goal-oriented perspective on the future, one may expect a positive relationship between the two. One may also expect that both characteristics would correlate negatively with less-desirable qualities. For example, the question of the relationship between religiosity and neuroticism has raged for the better part of this

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† To whom all correspondence should be addressed.

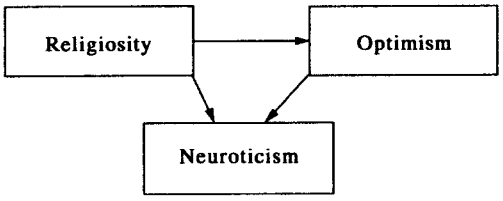

Fig. 1.The proposed model.

century, and most recent research remains contradictory. Francis, in various studies, has found either non-significant relationships between these two variables (Francis, 1993), or negative relationships (Francis, 1991, 1992).

In comparison, it is only recently that optimism has been examined in relation to other personality variables. Williams (1992) has reported that optimism correlates negatively with neuroticism in adults, and Sethi and Seligman (1993) have found that optimism correlates positively with degree of religious fundamentalism. Such correlations of religiosity and optimism with other personality variables have been conducted less-frequently world-wide, and to the best of our knowledge not at all among Mexican-Americans, Anglo-Americans, and Mexican citizens—the *S*s of this study.

Given demographics which predict that the Hispanic ethnic group (of which Mexican-Americans constitute a majority) will become the largest minority in the United States early in the next century (Day, 1992), it would seem useful to examine their profiles on these variables. Such data would not only improve the understanding of these apparently powerful health predictors in a growing ethnic group, but by also considering Mexican nationals in comparison would additionally serve to test the cross-cultural generalizability of existing studies.

Based on the literature, a proposed path model was created for testing cross-culturally. In it, high religiosity was expected to be predictive of greater optimism, while both religiosity and optimism would be predictive of emotional stability/low neuroticism. Some comment may be necessary as to the ordering of these variables. Sethi and Seligman (1993) have demonstrated empirically that religiosity (particularly religious fundamentalism) leads to a sense of optimism, hence one would expect a positive relationship between these two variables. As Francis (1992) has suggested, the more religious of a population will also be the most mentally stable, hence one may expect a negative relationship between religiosity and neuroticism. Williams (1992) has demonstrated a negative relationship between dispositional optimism and neuroticism, hence we followed the same prediction.

Some comment may also be in order as to the use of religiosity as an independent variable and neuroticism (or optimism) as a dependent variable. While it may be argued that the usual causal ordering of these variables is in reverse order [such that neuroticism is predictive of religiosity (e.g. Caird, 1987; Francis, 1992)], we believe it at least as reasonable, and perhaps more logical, to suggest that given a certain level of religiosity, one may predict a person's score on other variables, such as optimism or neuroticism. One may also argue that those who are more religious (assuming it is measured cognitively rather than by behavior) are more likely to expect good things to happen to them (i.e. they are more optimistic). Those who are more optimistic are happier and more stable (Scheier & Carver, 1985).

To reiterate: the model hypothesized to be consistent across the three cultures was the following: religiosity will be positively predictive of optimism, and both optimism and religiosity will be negatively predictive of neuroticism (see Fig. 1). Results from *S*s of Hispanic origin (Mexican-Americans and Mexican nationals) should show a particularly salient relationship consistent with the model, particularly if one considers, as does Francis (1992), that intrinsically religious samples may show greater mental stability. Numerous authors, including Neff and Hoppe (1993) and Ramirez and Castaneda (1974), have highlighted the salience of religiosity in the Mexican-American and Mexican national cultures.

METHOD

Subjects

Participants for this study were 295 persons (M = 22.1 yr, SD = 6.7; 46% Mexican-Americans, 38% Anglo-Americans; and 16% Mexican citizens; overall 68% were female). All *S*s were students

enrolled in introductory psychology courses at an American university located on the U.S.–Mexico border.

Materials

Life Orientation Test (LOT) (Scheier & Carver, 1985). This scale is a 12-item Likert instrument, for which Cronbach's α was reported as 0.76, with a test–retest reliability of 0.79 for a 4-week interval. This scale is designed to measure general attitudes about the future, be they optimistic or pessimistic. Due to a report by Smith, Pope, Rhodewalt and Poulton (1989) suggesting that the LOT has limited discriminant validity relative to neuroticism, an additional optimism measure was selected.

Revised Generalized Expectancy for Success Scale (GESS-R) (Hale, Fiedler & Cochran, 1992). The GESS-R is a 25-item Likert-type scale which presents a number of statements about future situations and asks the respondent to evaluate the likelihood of he or she being in that particular situation. The GESS-R differs from the LOT in that the former measures optimism relative to specific anticipated situations, rather than an overall attitude of optimism or pessimism as measured by the LOT. The GESS according to Smith *et al.* (1989) is less susceptible to the confounding effects of neuroticism than is the LOT. Split-half reliability for the GESS-R was reported by its authors at 0.92, with test–retest reliability being 0.69 for 6 weeks.

Short-form N scale of the Eysenck Personality Questionnaire—Revised (Eysenck, Eysenck & Barrett, 1985). This scale consists of 12 statements to which a respondent answers yes or no. Francis, Philipchalk and Brown (1991) found that the short-form version of the N scale correlates between +0.95 and +0.96 with the longer version on the original Eysenck Personality Questionnaire.

A Religion Scale (Bardis, 1961). Religiosity has been a difficult construct to measure because of the large number of definitions of religiosity. Caird (1987) divided measures of religiosity into three groups: cognitive (those which focus on religious attitudes or beliefs), behavioral (measures which seek to evaluate church attendance or private prayer), and experiential (which query as to mystical experiences). Because we were interested in exploring religiosity across ethnic groups, we followed Kenney, Cromwell and Vaughan's (1977) argument that behavioral measures (which generally measure institutionalized forms of devotion to the exclusion of beliefs and values) are unlikely to best represent the religiosity of urban ethnic minorities such as Mexican-Americans. Therefore it was decided to use Bardis' (1961) scale, a 25-item Likert-type measure of cognitive religiosity which has the additional advantages of being non-denominational and reasonably 'Christianity-free'. Split-half reliabilities of between 0.73 and 0.90 have been reported for this scale, with test–retest reliabilities of between 0.84 and 0.98 (Bardis, 1961; Shaw & Wright, 1967).

Procedure

Participants completed a packet including an informed consent form and the four scales. *Ss* also provided demographic information. Multiple regression techniques were used to evaluate the proposed model in the three ethnic samples.

RESULTS

Summary statistics for all four instruments are presented in Tables 1–3. Table 1 presents the means and standard deviations by sex and ethnic/national group. No significant differences among

Table 1. Means and standard deviations for all instruments by sex and ethnicity/national group

	Anglo-Americans		Mexican-Americans		Mexican Citizens	
	Men	Women	Men	Women	Men	Women
LOT	20.3 (4.9)	21.6 (4.8)	21.9 (5.0)	20.3 (4.4)	21.4 (2.7)	20.5 (5.6)
Relig	47.6 (18.8)	56 (16.9)	59.5 (14.7)	56.9 (14.5)	48.4 (15.4)	57.8 (17.3)
Neurot	4.7 (3.4)	5.5 (3.2)	4.5 (2.9)	6.3 (3.4)	4.4 (2.4)	5.9 (3.5)
GESS-R	101.9 (9.8)	104.5 (10.3)	105 (8.4)	100.9 (10.4)	100.2 (8.1)	106.9 (9.8)

Note: Standard deviations are in parentheses.

Table 2. Zero-order correlations among instruments by national group

	LOT	GESS-R	NEU
Anglo-Americans			
GESS-R	0.58**		
NEU	−0.55**	−0.34**	
REL	0.14	0.02	0.10
Mexican-Americans			
GESS-R	0.49**		
NEU	−0.44**	−0.28**	
REL	0.15	0.16	0.13
Mexican Citizens			
GESS-R	0.09		
NEU	−0.40**	0.04	
REL	0.24	0.04	0.05

*$P < 0.05$, **$P < 0.01$.

the means for the three ethnic/national groups were obtained. The largest difference among the groups was for religiosity in which Anglo-Americans were somewhat less religious ($M = 53$) than Mexican citizens ($M = 55$) and Mexican-Americans ($M = 58$), but the differences were not reliable, $F(2,251) = 2.43$, $P = 0.09$.

Within groups reliable sex differences were found for religiosity of Anglo-Americans, $F(1,106) = 5.24$, $P < 0.03$. Anglo females were more religious.

Mexican-American males and females differed reliably on both neuroticism, $F(1,118) = 7.73$, $P < 0.01$, and on optimism as measured by the GESS-R, $F(1,134) = 5.02$, $P < 0.03$. Males scored lower than females on the Neuroticism scale and higher on optimism.

Mexican citizen females were reliably more optimistic than their male counterparts, GESS-R $F(1, 46) = 6.30$, $P < 0.02$.

Table 2 presents the zero-order correlations among the four variables of interest. Note that the direction of relationship in each case is as predicted. That is, religiosity is positively associated with optimism which is negatively associated with neuroticism (for all three groups). These relations are maintained when sex is partialed as can be seen in Table 3.

With reference to the path model, in the Mexican-American sample greater religiosity predicted higher optimism on the LOT ($\beta = 0.26$, $P < 0.01$), which in turn predicted neuroticism (low optimism as associated with high neuroticism, $\beta = -0.44$, $P < 0.001$). Higher religiosity was also predictive of higher neuroticism, $\beta = 0.21$, $P < 0.01$.

In the Anglo sample religiosity did not predict scores on the LOT, though optimism did predict neuroticism ($\beta = -0.58$, $P < 0.0001$). Again low optimism was associated with high neuroticism. Religiosity was not predictive of neuroticism.

In the Mexican citizen sample religiosity again did not predict scores on the LOT, though optimism did predict neuroticism ($\beta = -0.32$, $P < 0.04$). Religiosity again was not predictive of neuroticism.

When optimism as measured by the GESS-R was examined, the following results were yielded: for Mexican-Americans, religiosity was predictive of optimism ($\beta = 0.19$, $P < 0.03$), which in turn

Table 3. Partial correlations controlling for sex

	LOT	GESS-R	NEU
Anglo-Americans			
GESS-R	0.61**		−0.34**
NEU	−0.57**	−0.34**	
REL	0.13	0.002	0.07
Mexican-Americans			
GESS-R	0.47**		−0.25**
NEU	−0.43**	−0.25**	
REL	0.12	0.12	0.17
Mexican Citizens			
GESS-R	0.06		−0.05
NEU	−0.39**	−0.05	
REL	−0.40**	−0.07	−0.14

*$P < 0.05$, **$P < 0.01$.

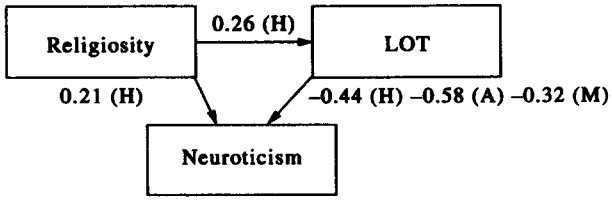

Fig. 2. Results with the LOT as optimism measure. H, Mexican-American; A, Anglo-American; M, Mexican citizen. Coefficients given are β-weights.

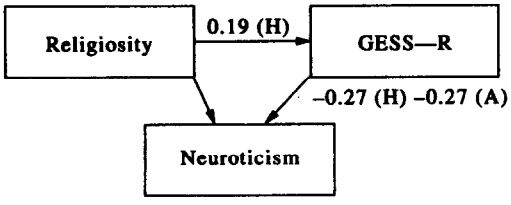

Fig. 3. Results with the GESS-R as optimism measure. H, Mexican-American; A, Anglo-American. Coefficients given are β-weights.

was predictive of neuroticism ($\beta = -0.27$, $P < 0.01$). For Anglos, again only optimism, in this case measured by the GESS-R, was predictive of neuroticism ($\beta = -0.27$, $P < 0.01$); religiosity was not predictive of GESS-R optimism. For Mexican citizens, no significant relationship was found among any of the three variables.

DISCUSSION

The ability of religiosity to predict optimism in the Mexican-American but not Anglo sample was interesting and consistent with Francis' (1992) theory that in more intrinsically religious samples (or perhaps even cultures) the more religious will also be the most mentally stable. As optimism has correlated negatively with neuroticism [a characteristic frequently defined as moodiness or instability (e.g. Eysenck & Eysenck, 1975)], this may account for the cultural difference. Both anecdotal and empirical evidence by such authors as Neff and Hoppe (1993), Mirowsky and Ross (1984), and Ramirez and Castaneda (1974) points to the salience of religion and religiosity in the Mexican-American culture, particularly when viewed with respect to the Anglo culture. Indeed, Mexican-American *Ss* scored higher than the other two ethnic groups on religiosity, at $P < 0.09$.

In the Mexican citizen sample the inability of religiosity to predict either LOT or GESS-R optimism was unexpected, and obviously cannot be explained by considering the Mexican-American culture to be more intrinsically religious than the Mexican culture, unless one considers that being an ethnic minority in an Anglo-dominant culture might cause one to seek internal, spiritual support not as much in demand in one's nation of ethnic origin, a position somewhat supported by the literature (e.g. Keefe, 1982). It may also be that the optimism instruments, measuring an internal, individual (LOT) and career-oriented hopefulness [GESS-R (Carrillo, Valerio & Schutte, 1994)] may not be tapping the type of optimism which religiosity is predictive of in such an other-oriented, collectivistic culture as that of Mexico (Marin & Triandis, 1985).

The relationship between neuroticism and optimism across both measures and in all three ethnic groups was consistent with predictions and recent literature (e.g. Williams, 1992). However, the failure of GESS-R optimism to predict neuroticism in the Mexican national sample was curious and deserves further study. The failure of religiosity to predict neuroticism in all but the Mexican-American sample was contrary to predictions but consistent with much of the literature which has failed to find a relationship between these two variables. The positive relationship between neuroticism and religiosity in Mexican-Americans was unexpected, though it does hark to earlier reports in the literature, including those of Freud (1950), of a positive relationship between these two variables. It is possible that the same uncertainty, or acculturative stress, which may cause Mexican-Americans to seek stability in religion may contribute somewhat to characteristics of neuroticism, a position recently posited by Saldana (1994). This relationship is also worthy of future study.

In conclusion, we believe this study proves useful in examining the relationship between optimism, religiosity, and other personality characteristics between cultures which may or may not be (and in this case were not) identical to those obtained in a purely Anglo sample. Hopefully this research will encourage further investigation of optimism, religiosity, and their related personality variables, particularly in a cross-cultural context.

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