

RELIGIOSITY AND WELL-BEING IN SLOVAK AND HUNGARIAN STUDENT SAMPLES: THE ROLE OF PERSONALITY TRAITS

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Abstract: The study deals with the relationship between religiosity and different aspects of well-being in samples of Slovak and Hungarian university students and raises the question of whether this relationship is moderated by personality traits. Francis Scale of Attitude towards Christianity, Diener's Satisfaction with Life Scale, Oxford Happiness Questionnaire, Purpose in Life test, Steger's Meaning in Life Questionnaire, Rosenberg Self-Esteem Scale and Bipolar Big Five Markers were administered to 274 Slovak and 249 Hungarian university students. The results of bivariate comparisons showed that religiosity correlated positively with meaning in life in both samples, but higher religiosity was associated with satisfaction and happiness in the Hungarian sample only. A series of moderated regression analysis testing three-way interaction models (religiosity x personality trait x nation) showed no support for an overall moderation effect of personality traits. Only weak interactions were found for agreeableness and openness in the Slovak sample when predicting meaning in life. The authors emphasize the need to take the cultural context of the religiosity/well-being relationship into account and suggest the need for further research on the question of whether religiosity could be considered as a universal source of meaning in different cultures.

Key words: religiosity, well-being, meaning in life, personality traits, cross-cultural comparison

INTRODUCTION

The focus of present-day psychology is characterized by a move from the negative aspects of psychological functioning (e.g., depression, anxiety, etc.) towards understanding the person's strengths and virtues that enable him or her to improve and sustain psychological quality of life and well-being (e.g., Seligman, 2000; Kováč, 2003). Comprehensive handbooks in the

field of positive psychology identified and described many such strengths and factors, including cognitive, emotional and interpersonal constructs (e.g., Snyder, Lopez, 2001; Peterson, Seligman, 2004).

Religiosity and spirituality have been frequently mentioned among these factors. Since the beginning of research into well-being, religious involvement has been intensively studied as a possible source of a good and happy life. The findings have mostly supported a positive link between religiosity and well-being; however, these were not always replicable. Most of the studies found that religious involvement is

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positively related to various aspects of well-being, e.g. life satisfaction (Peacock, Poloma, 1999), happiness (Francis, Lester, 1997) or meaning in life (Chamberlain, Zika, 1988; Křivohlavý, Petříková, 2001). R.A. Emmons et al. (1998) found that the presence of spiritual strivings in a person's motivation system is related to higher life satisfaction and meaning in life.

The assumption of a positive relationship between religiosity and well-being was also supported by demographic data. D.G. Mayers (1993) reviewed several sets of data in North America and Europe and he concluded that religious faith is a positive predictor of self-reported well-being and happiness. Due to numerous studies done in this field, first meta-analyses appeared very early. R.A. Witter et al. (1985) made a meta-analysis of studies available at that time and found that the relationship between religiosity and well-being is positive, accounting for between 2 and 6 percent of variance. More recent meta-analysis by C.H. Hackney and G.S. Sanders (2003) also confirmed these results. The authors focused on mental health, defined as everyday psychological adjustment (including satisfaction or happiness) and they found an overall relationship between religion and mental health, with a correlation of 0.10. Regarding the question of what the aspects of religiosity are that help persons to experience a happier and more meaningful life, L. Miller and B.S. Kelley (2005) list social support, positive emotions (e.g., during religious services or prayer), religious coping, identity constituents, positive life philosophy, etc.

However, studies with neutral or opposite results are also available. C.A. Lewis, in a series of studies by him and his colleagues (Lewis et al., 1997; 2000; 2005), repeatedly failed to find an association between religiosity and happiness. In the latest of

these studies (Lewis et al., 2005), however, the authors found a positive relationship between intrinsic religiosity and positive religious coping and they suggested that religiosity is related only to some aspects of well-being. This is in line with the review of more than 100 studies made by W.L. Ventis (1995), which also brought different results: He discovered a positive relationship, but only for intrinsic, not for extrinsic religiosity. In his influential paper on subjective well-being, E. Diener (1984) concluded that although many studies exist proving a positive relationship between religiosity and well-being, some authors arrived at opposite results, e.g. at a negative correlation between positive mood and religiosity (Cameron, as cited by Diener, 1984). He agrees that religiosity could be generally considered a positive predictor of well-being, but there are many questions unanswered, e.g. what are the links between religiosity and happiness, which factors interact with religiosity when predicting well-being, etc.

Religiosity therefore seems to have a complex relationship with well-being. There have been attempts to identify how different variables interact with religiosity in prediction of well-being. We have already mentioned studies focusing on the dimensions of religiosity (e.g., intrinsic, extrinsic), but several of them also focused on demographic variables. The results showed that the relationship between religiosity and well-being is stronger for women and it also tends to increase with increasing age (Ellison, 1991; Koenig et al., 1988). A.St. George and P. McNamara (1984) found that in the American population, the effect of religion on well-being is stronger for Afro-Americans than for Caucasians.

When considering possible moderators of the religion and well-being relationship,

personality traits seem to be worthy of great attention. Personality traits have been repeatedly observed as correlates of both religiosity (e.g., Francis, Lester, 1997; Lewis, Maltby, 1995; Adamovová, Stríženec, 2004), and well-being (e.g., Hayes, Joseph, 2002; Diener et al., 2003). With regard to Big Five personality traits, which currently seem to be the dominant approach in personality trait concepts, their relationship with religiosity and well-being has been also proved by meta-analytic studies. V. Saroglou (2002) found that religiosity is systematically related to agreeableness, conscientiousness, and extraversion. In their meta-analysis K. DeNeve and H. Cooper (1998) found that life satisfaction and happiness are negatively predicted by neuroticism and positively by extraversion and agreeableness. However, research on whether personality traits moderate the direction and/or strength of the relation between religiosity and well-being is missing.

The aim of the present study is to explore the relationship between religiosity and several aspects of well-being (satisfaction, happiness, meaning in life and self-esteem) in samples of Slovak and Hungarian university students. We also focus on the question of whether personality traits, as defined in Big Five theory, moderate the relationship between them. Considering the religious demography in both countries (both are predominantly Christian), we decided to define religiosity through attitude toward Christianity. On the basis of previous research, we hypothesize the existence of a positive relationship between religiosity and well-being, at, however, the lower level. We also assume that agreeableness and conscientiousness in particular could act as mediators between religiosity and well-being.

METHOD

Sample

The Slovak sample consisted of 274 university students. 128 of them were males and 146 females. Their age ranged from 18 to 33, with an average of 21.59 and a standard deviation of 1.98. Respondents were recruited at different universities in Slovakia through voluntary collaborators, who asked the students to participate in the research. Most of the participants (82%) studied at universities located in Western Slovakia (Bratislava, Trnava).

The Hungarian sample was a subsample of a larger dataset. Students of a Catholic University in Central Hungary were given partial credit for participating in the study and collecting additional data among their friends and relatives. In order to fit the main characteristics of the participants to that of the Slovak sample, only students were selected for the purposes of this study. In this way 249 participants made up this subset, 94 males and 155 females. Their age ranged from 18 to 35 years, with an average of 22.16 years ($SD = 3.12$).

Measures

For measuring the level of Christian religiosity, *Francis Scale of Attitude towards Christianity* (FSAC) was used. It was originally created by L.J. Francis (1989) for measuring religiosity in adolescents. Later, a shorter adult form was produced and subjected to psychometric verification (Francis et al., 1995; Maltby, Lewis, 1997), which confirmed its high reliability and validity. This version was used in the present study and consists of 7 items referring to attitude toward and opinions about

Christian constructs (God, Bible, church-going, prayer), e.g., *God helps me lead a better life, God means a lot to me*. The respondent is asked to provide his or her agreement on a 5-point Likert-type scale. Higher score means higher religiosity.

Like several theoreticians (e.g., Ryff, 1989), we hold to a broader understanding of well-being than pure satisfaction or happiness. Therefore, we decided to measure well-being with several measures referring to various components of well-being: satisfaction, happiness, meaning in life and self-esteem.

Satisfaction with Life Scale (SWLS) is a 5-item scale measuring general sense of life satisfaction defined as a person's overall judgment of their life within their own frame of reference (Diener et al., 1985). The items (e.g., *In most ways my life is close to my ideal, I am satisfied with my life*) are responded to on a 7-point scale, and the score is computed as a mean response. SWLS is one of the most used scales to assess the general aspects of well-being and many psychometric studies confirmed its good reliability and validity in different regions, including Central Europe (e.g., Pavot et al., 1991; Lewis et al., 1999).

Oxford Happiness Questionnaire (OHQ) was developed from its longer version (Oxford Happiness Inventory) as a shorter but well validated measure for assessing happiness in its broader sense (Hills, Argyle, 2001). It contains 8 items focusing on different aspects of happiness and well-being, e.g., *I feel that life is very rewarding, I am well satisfied about everything in my life*, with a 6-point Likert scale provided for response. The results of the initial psychometric analysis (Hills, Argyle, 2001) showed that OHQ has good reliability and validity when tested in comparison with its longer version as well as toward

personality scales usually associated with well-being.

Purpose in Life Test (PIL) (Crumbaugh, 1968) is a 20-item long questionnaire for measuring the level of meaning in life or negatively, existential vacuum. It was based on V.E. Frankl's logotherapy theory and items of the scale are related to the degree to which the individual experiences "purpose in life". The item format is a 7-point semantic differential scale, with differently defined labels for each of the items. For example, item 4 states: *"My personal existence is: (1) utterly meaningless, without purpose (7) very purposeful and meaningful."*, and item 9: *"My life is: (1) empty, filled only with despair ... (7) running over with exciting things."* The questionnaire is the most frequently used measure of meaning in life and several studies reported satisfactory internal consistency as well as temporal stability (Reker, Cousins, 1979; Reker, Fry, 2003).

Meaning in Life Questionnaire (MLQ) was constructed as an alternative measure of meaning consisting of two subscales (Steger et al., 2006). The Presence subscale assesses cognitive appraisals of whether life is meaningful (e.g., *"I have a good sense of what makes my life meaningful"*), and the Search subscale assesses general tendencies to actively seek meaning and purpose in life (e.g., *"I am seeking a purpose or mission for my life"*). The questionnaire has 10 items (5 for each subscale) with 7-point Likert-type response format. The authors (Steger et al., 2006) proved its good discriminant validity and stable factor structure.

Rosenberg Self-Esteem Scale (RSES) is a 10-item scale that measures the global level of a person's self-esteem. It was created in 1965 by M. Rosenberg and has been widely used in research on global self-esteem in different contexts and coun-

tries (e.g., Schmidt, Allik, 2005). It uses a 4-point Likert-like scale format (ranging from absolutely disagree to absolutely agree). Five items are formulated positively and five items negatively, e.g., *On the whole I am satisfied with myself or I feel I do not have much to be proud of*. Many studies have focused on its psychometric properties, proving its good reliability and validity, but questioning its simple factor structure (Pullman, Allik, 2000; Halama, 2008).

In the present study, personality traits were approached through Big Five personality theory. *Bipolar Big Five Markers* were used to measure Big Five personality traits (Shafer, 1999). This measure contains 30 pairs of adjectives, repre-

senting the Big Five personality traits, Extraversion, Neuroticism, Conscientiousness, Agreeableness and Openness. Self-rating is provided on a 7-point scale, e.g. *quiet-talkative, unworried-fearful, lazy-hardworking, reserved-friendly, unartistic-artistic*. The author (Shafer, 2001) states, that the scale items have high and univocal factor loadings on the Big Five dimensions and adequate level of internal consistency across different samples.

RESULTS

Table 1 presents descriptive characteristics (means, standard deviations) and Cronbach's alphas for all scales used in the research separately for the Slovak and

Table 1. Means, standard deviation and Cronbach's alphas of measured variables, as well as t-tests and Cohen's d coefficients for comparisons of the Slovak and Hungarian samples

| | Slovakia (n = 274) | | | Hungary (n = 249) | | | t-value | Cohen's d |
|-------------------|--------------------|-------|-------|-------------------|-------|-------|---------|-----------|
| | Mean | SD | Alpha | Mean | SD | Alpha | | |
| FSAC | 25.27 | 8.12 | 0.95 | 22.84 | 7.93 | 0.93 | -3.43** | 0.30 |
| SWLS | 4.53 | 1.14 | 0.81 | 5.14 | 1.16 | 0.83 | 6.01** | -0.53 |
| OHQ | 35.03 | 5.56 | 0.65 | 34.42 | 5.98 | 0.74 | -1.21 | 0.11 |
| PIL | 105.26 | 13.61 | 0.85 | 103.10 | 14.86 | 0.88 | -1.72 | 0.15 |
| MLQ presence | 24.51 | 6.06 | 0.78 | 24.76 | 7.18 | 0.90 | 0.43 | -0.04 |
| MLQ search | 23.44 | 7.42 | 0.88 | 24.08 | 6.35 | 0.80 | 1.06 | -0.09 |
| RSES | 30.61 | 5.21 | 0.84 | 29.92 | 5.80 | 0.87 | -1.42 | 0.12 |
| Neuroticism | 20.32 | 6.00 | 0.82 | 22.08 | 6.60 | 0.89 | 3.18** | -0.27 |
| Extraversion | 30.63 | 6.59 | 0.85 | 28.99 | 7.50 | 0.83 | -2.66** | 0.23 |
| Conscientiousness | 29.70 | 5.67 | 0.78 | 29.92 | 6.11 | 0.78 | 0.43 | -0.04 |
| Agreeableness | 27.18 | 5.44 | 0.63 | 27.81 | 5.25 | 0.67 | 1.33 | 0.11 |
| Openness | 29.11 | 5.11 | 0.66 | 27.71 | 5.64 | 0.70 | -2.96** | 0.26 |

* $p \leq 0.05$, ** $p \leq 0.01$

FSAC - Francis Scale of Attitude towards Christianity (short version), SWLS - Satisfaction with Life Scale, OHQ - Oxford Happiness Questionnaire (short version), PIL - Purpose in Life test, MLQ - Meaning in Life Questionnaire, RSES - Rosenberg Self-Esteem Scale

Hungarian samples. As can be seen, the Slovak sample can be characterized by higher religiosity and lower life satisfaction compared with the Hungarian sample. As regards personality traits, Slovaks are less neurotic, more extraverted and open; the effects sizes, however, are small with the exception of life satisfaction, where they are moderate. Cronbach's alphas of the measures are satisfactory for both samples.

In the next step, we computed Pearson correlations between religiosity, well-being and personality variables separately for Slovaks and Hungarians. They are presented in Table 2. Correlations for the Slovak sample are placed below and for the Hungarian sample above the diagonal. Positive attitude towards Christianity is related to higher meaningfulness in both samples; it was, moreover, related to higher life satisfaction and happiness in the

Table 2. Pearson correlations between Francis Attitude toward Christianity Scale, well-being measures and personality traits (the Slovaks under the diagonal, the Hungarians above the diagonal)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------|------------|
| 1. FSAC | - | .22 ** | .26 ** | .23 ** | .22 ** | .03 | .06 | -.03 | .11 | -.02 | .12 | .07 |
| 2. SWLS | .06 | - | .63 ** | .58 ** | .44 ** | -.12 | -.44 ** | -.29 ** | .30 ** | .28 ** | .10 | .11 |
| 3. OHQ | .05 | .59 ** | - | .64 ** | .51 ** | .01 | .62 ** | -.46 ** | .39 ** | .32 ** | .10 | .26 ** |
| 4. PIL | .24 ** | .54 ** | .69 ** | - | .66 ** | -.08 | .61 ** | -.45 ** | .41 ** | .44 ** | .04 | .29 ** |
| 5. MLQ presence | .21 ** | .39 ** | .34 ** | .52 ** | - | -.06 | .47 ** | -.40 ** | .18 ** | .35 ** | .04 | .23 ** |
| 6. MLQ search | .02 | -.23 ** | -.21 ** | -.22 ** | -.33 ** | - | -.13 * | .17 ** | -.10 | -.09 | .02 | .03 |
| 7. RSES | -.02 | .48 ** | .59 ** | .59 ** | .34 ** | -.32 ** | - | -.49 ** | .26 ** | .34 ** | -.03 | .32 ** |
| 8. Neuroticism | .08 | -.38 ** | -.45 ** | -.42 ** | -.23 ** | .23 ** | -.53 ** | - | -.43 ** | -.24 ** | -.10 | -.33 ** |
| 9. Extraversion | -.06 | .25 ** | .34 ** | .36 ** | .05 | .06 | .23 ** | -.33 ** | - | .18 ** | .05 | .18 ** |
| 10. Conscientiousness | .13 * | .24 ** | .27 ** | .40 ** | .28 ** | -.23 ** | .29 ** | -.21 ** | .02 | - | .08 | .06 |
| 11. Agreeableness | .29 ** | .13 * | .21 ** | .22 ** | .11 | -.10 | .04 | -.12 | .03 | .23 ** | - | .01 |
| 12. Openness | -.11 | .03 | .12 * | .16 ** | -.01 | .05 | .08 | -.05 | .19 ** | .00 | .03 | - |

* $p \leq 0.05$, ** $p \leq 0.01$

FSAC - Francis Scale of Attitude towards Christianity (short version), SWLS - Satisfaction with Life Scale, OHQ - Oxford Happiness Questionnaire (short version), PIL - Purpose in Life test, MLQ - Meaning in Life Questionnaire, RSES - Rosenberg Self-Esteem Scale

Hungarian sample. However, there are also differences in correlations between religiosity and personality traits. Positive attitude toward Christianity correlated with agreeableness and also slightly with conscientiousness in the Slovak sample, but not in the Hungarian sample.

Moderated multiple regression (Aiken, West, 1991) was used to address the question of whether personality traits moderate the relationship between religiosity and well-being in the two nations. Three-way interaction procedure (religiosity x personality trait x nation) with post-hoc Slope difference test (Dawson, Richter, 2006) was applied for this analysis. All continuous variables had been centered and the categorical variable of nation was dummy coded before the interaction term was computed. All of the well-being measures were used as dependent variables in a series of moderated regression analyses. Attitude toward Christianity, personality trait, nation were entered in the first step, the three two-way interaction terms in the

second step, and the three-way interaction term in the third step. Altogether 30 moderated regression analyses were run (for five personality traits as moderators and six well-being measures as dependent variables). There were two cases where the three-way interaction term was found to add a significant amount of predicted variance to the regression model (see below). In no other case was either the three-way interaction term in the third step or the two-way interaction term of religiosity and personality trait in the second step found to reach satisfactory level of significance ($p \leq 0.05$) when predicting well-being measures in the regression models. Therefore, no measured personality trait was revealed to be a stable moderator of religiosity and well-being relationship across nations.

Table 3 presents the results of three-step moderated regression analysis of interaction between religiosity, agreeableness and nation when predicting presence of meaning as measured by Meaning in Life Ques-

Table 3. Moderated regression analysis testing three-way interaction of agreeableness, religiosity and nationality predicting presence of meaning (MLQ)

| | β | R^2 |
|------------------------|---------|---------------------------|
| <i>Step 1</i> | | .046 |
| FSAC | .204** | |
| Agreeableness | .042 | |
| Nation | -.043 | |
| <i>Step 2</i> | | .050 |
| FSAC | .309* | $\Delta R^2 = .004, n.s.$ |
| Agreeableness | -.010 | |
| Nation | -.047 | |
| FSAC x Agreeableness | .046 | |
| FSAC x Nation | -.111 | |
| Agreeableness x Nation | .061 | |

Table 3 continues

Table 3 (continued)

| | β | R^2 |
|-------------------------------|---------|-----------------------|
| <i>Step 3</i> | | .062 |
| FSAC | .322* | $\Delta R^2 = .012^*$ |
| Agreeableness | -.046 | |
| Nation | -.070 | |
| FSAC x Agreeableness | -.313* | |
| FSAC x Nation | -.105 | |
| Agreeableness x Nation | .086 | |
| FSAC x Agreeableness x Nation | .377* | |

* $p \leq 0.05$, ** $p \leq 0.01$

tionnaire. As can be seen, the regression analysis revealed a main effect for religiosity, but not for agreeableness and nation. The addition of the two-way interaction terms in the second step did not cause significant R^2 change, but adding the three-way interaction term in the third step brought 1.2% significant increase in R^2 . Figure 1 presents the graphs of three-way interaction slopes separately for the Slovak and Hungarian samples, with predicted values of meaning in life for low and high values (1 SD below and above the mean,

respectively) of predictor variables. Application of a test for slope differences (Dawson, Richter, 2006) revealed that there is a significant difference between the slopes for low and high agreeableness in the Slovak sample ($t = 2.399$, $p = 0.016$), but not in the Hungarian sample ($t = -1.235$, $p = 0.217$). This means that religious Slovaks with high agreeableness have higher presence of meaning than highly religious Slovaks with low agreeableness. In contrast, higher religiosity predicts higher meaning for Hungarians,

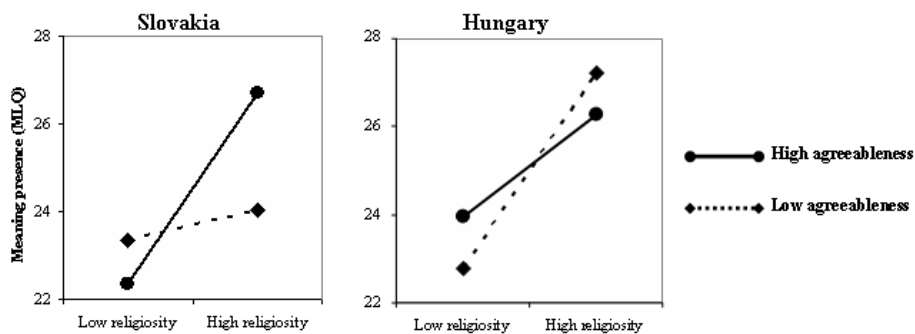


Figure 1. Predicted values for presence of meaning (MLQ) as a function of agreeableness and religiosity in the two nations; low and high values represent 1 SD below and above the mean

regardless of their level of agreeableness.

Table 4 presents the results of the moderated regression analysis for interaction between religiosity, openness and nation when predicting meaning in life as measured by Purpose in Life Test. In this case, main effect was found for religiosity and openness. Similarly to the previous analysis, the second step did not cause a significant R^2 change but, after the inclusion of the three-way interaction term, R^2 significantly increased by 0.9%. The slope difference tests for the slopes presented in

Figure 2 revealed no significant difference between the slopes, but there was a tendency for the slopes for low and high openness to be different in the Slovak but not in the Hungarian sample ($t = 1.718$, $p = 0.086$ and $t = -0.148$, $p = 0.139$, respectively). This again means that religious Slovaks with high openness tend to have higher meaning in life than religious Slovaks with low openness, while higher religiosity predicted higher purpose in life for Hungarian respondents with both low and high openness.

Table 4. Moderated regression analysis testing three-way interaction of openness, religiosity and nationality predicting meaning in life (PIL)

| | β | R^2 |
|--------------------------|---------|----------------------------|
| <i>Step 1</i> | | .115 |
| FSAC | .246** | |
| Openness | .233** | |
| Nation | .008 | |
| <i>Step 2</i> | | .116 |
| FSAC | .203 | $\Delta R^2 = .001$, n.s. |
| Openness | .330* | |
| Nation | .009 | |
| FSAC x Openness | -.001 | |
| FSAC x Nation | .042 | |
| Openness x Nation | -.101 | |
| <i>Step 3</i> | | .125 |
| FSAC | .223 | $\Delta R^2 = .009$ * |
| Openness | .333 | |
| Nation | .016 | |
| FSAC x Openness | -.290* | |
| FSAC x Nation | .001 | |
| Openness x Nation | -.127 | |
| FSAC x Openness x Nation | .312* | |

* $p \leq 0.05$, ** $p \leq 0.01$

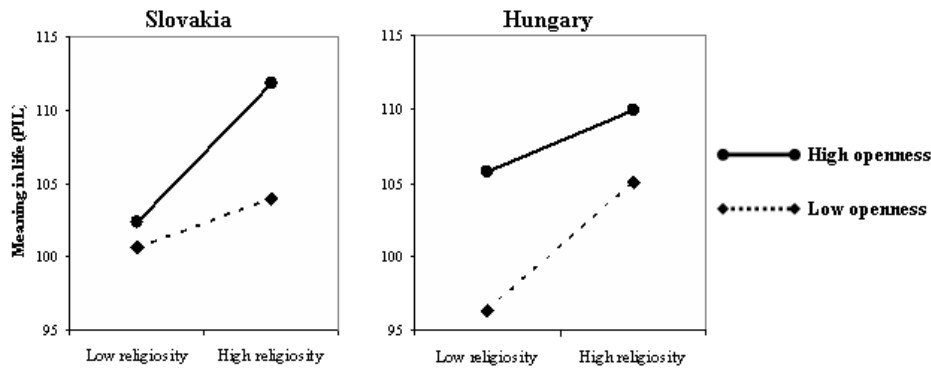


Figure 2. Predicted values for meaning in life (PIL) as a function of openness and religiosity in the two nations; low and high values represent 1 SD below and above the mean

DISCUSSION

Descriptive analysis and comparisons revealed that in most of the variables the Slovak and Hungarian university students showed no significant differences. Differences in personality traits (Slovak students were shown to be more extraverted, more open to experience and less neurotic than Hungarian ones) could be considered as small, as Cohen's d of around 0.2 is considered a low effect size. Until now, there is no representative comparison of Hungarians and Slovaks in cross-cultural research, because Slovakia and Hungary were not included simultaneously in robust cross-cultural studies (e.g., Allik, McCrae, 2004; McCrae, Terraciano, 2005). Therefore, our result cannot be compared with previous studies. Also, neither sample in this research met a criterion of representativity and the generalization of these differences has to be restrained. Bigger differences were found in religiosity (higher score for Slovak sample) and in life satisfaction (higher score for Hungarian sam-

ple). Difference in religiosity level is still moderate (Cohen's d 0.30), however, it has support in demographic data. Overall church membership is mildly higher in Slovakia than in Hungary. In the last census (2001) church membership was reported by 83% of Slovaks and 74% of Hungarians. The score in Francis Scale of Attitude towards Christianity could reflect this demographic situation. However, we have no clear explanation for the difference between Slovak and Hungarian university students in the level of life satisfaction (SWLS). The score is higher for Hungarians and reaches a medium effect size (Cohen's d 0.53). This result has no support in general data as stated e.g., by World Database of Happiness (Veenhoven, 2009), which shows slightly higher satisfaction for Slovaks in the latest years. We can only hypothesize about the source of this difference, e.g. due to the current economic mood (data were collected during the beginning of the economic crisis in spring and summer 2009), which can be different in Slovakia and Hungary. However, this consideration is

not supported by the differences in other measures of well-being (happiness, well-being), so other possible reasons are also conceivable.

The results of correlation analysis confirmed the positive relationship between religiosity and well-being that was identified in previous studies (e.g., Peacock, Poloma, 1999; Chamberlain, Zika, 1988; Hackney, Sanders, 2003). However, the pattern of correlations is different for the Slovak and the Hungarian samples. In the Hungarian sample, religiosity correlated positively with the presence of meaning in life, as well as with life satisfaction and happiness. In the Slovak sample, religiosity correlated with the presence of meaning in life, but not with life satisfaction and happiness. All significant correlations of religiosity and well-being are at a low level (0.21 - 0.26). This suggests that the religiosity and happiness/satisfaction relationship should be considered as culturally sensitive. Although previous research confirmed that the relationship of religiosity and happiness exists in different cultures, including western as well as non-western countries (e.g., Francis, Lester, 1997; Abdel-Khalek, 2006), our results focus attention back to the cultural aspects of this phenomenon. Support for a cross-cultural difference in this relationship is found in several studies. For example L.J. Francis et al. (2003) found no association between religiosity and happiness in German students, in contrast to their previous results with UK and USA samples. Also M.J. Dorahy et al. (1998), in their research with four samples from different nations (including Ghanaian, Nigerian, Northern Irish, and Swaziland university students) found that the religion/life satisfaction relationship is culturally dependent. Cultural specificity of religious behavior and expressions, status of religion in a society,

differences in other factors influencing satisfaction and happiness - all these factors could mediate and moderate the relationship between religiosity and well-being differently in different countries and should be taken into account when this relationship is pondered.

On the other hand, both samples showed a similar pattern of correlations between religiosity and meaningfulness. This supports the idea that religion is a primary system that provides meaning, as stated e.g., by C.L. Park (2007) and I. Silberman (2005). These authors see the main function of religion in providing a basic belief structure (including descriptive as well as prescriptive beliefs), providing a framework for coping with adversity and for its cognitive transformation. Our results suggest that religiosity can be considered as a candidate for a culturally independent source of meaning. However, cross-cultural research on religion and meaning is not as frequent as research on religion and happiness, hence this is only a preliminary assumption that should be verified in further research.

The other difference between the samples is concerned with the correlations between religiosity and personality. In the Slovak sample, correlations tend to conform to the results of previous studies (Piedmont, 2005; Saroglou, 2002), which found that agreeableness and conscientiousness are constantly related to religiosity. On the other hand, no personality trait correlated significantly with religiosity in the Hungarian sample. Most of the previous studies were done in West European and North American samples, e.g. 10 of 13 studies included in Saroglou's (2002) meta-analysis were done on samples from the U.S. and Canada. Therefore, our results again turn attention to the question of how the religiosity/personality relationship

depends on cultural and national characteristics.

Interaction analysis revealed no overall significant interactions of personality traits with religiosity that would have been stable across the two samples, which means that, in general, personality traits as defined in Big Five theory do not seem to be important moderators of the relationship between religiosity and well-being. Together with findings of Francis et al. (2004), who found that religiosity is a unique predictor of happiness even if controlled for personality traits, our results suggest that religiosity could be a source of well-being independently of personality. However, there were two exceptions as well, since agreeableness and openness interacted with religiosity when predicting meaning in life in the Slovak sample. In both cases, the higher level of these personality traits seems to help religious persons to perceive higher meaning in their lives. Agreeableness was frequently found to correlate with religious beliefs and behavior (Piedmont, 2005; Saroglou, 2002). We can hypothesize that agreeableness is in line with religious norms, so religious people with high agreeableness perceive their purpose and goals as more meaningful than people with high religiosity and low agreeableness. This way, the latter may perceive inconsistencies between their traits and religious demands that, in turn, can result in lower meaningfulness. As regards openness, since it is especially related to mature and open religiosity (Saroglou, 2002), it can stimulate cognitive processes accompanying the process of meaning making based on religious beliefs. It can help to use a religious framework in a more flexible way and be open to new forms of invoking the aid of religion when dealing with adversity. However, these considerations should be taken

with caution, because the underlying results were found only for one nation, not for all meaning measures and they were only of low magnitude (in the case of openness also of boundary significance). Also, we did not apply any p-value correction to avoid accidental significant associations resulting from numerous analyses, so further research should bring more convincing results on this issue.

CONCLUSION

To conclude, although religiosity does not seem to be the kind of source of satisfaction and happiness that is universal and independent of country and culture, it consistently proved to be related to meaningfulness. Further research should focus on how religion is understood in different cultures and how this understanding affects well-being. Also, more attention should be paid to the meaning making process based on religious beliefs and values, especially in its cultural context. Finally, although personality traits were not found to be universal moderators of the religiosity and well-being relationship, because there were minor differences in the Slovak and the Hungarian samples. In sum, our findings also point to the necessity of taking into account cross-cultural aspects of the relationship between religiosity and well-being as well as between religiosity and personality and of cultural context's maybe playing a role in these complex relationships.

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RELIGIOZITA A WELL-BEING U SLOVENSKÝCH A MAĎARSKÝCH
ŠTUDENTOV:
FUNKCIA OSOBNOSTNÝCH ČŔT

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Súhrn: Štúdia sa zaoberá vzťahom medzi religiozitou a rôznymi aspektmi well-beingu na výberoch slovenských a maďarských univerzitných študentov, pričom kladie otázku, či je tento vzťah moderovaný osobnostnými črtami. Vo výskume boli použité: Francisova Škála postoja voči kresťanstvu, Dienerova Škála spokojnosti so životom, Oxfordský dotazník šťastia, Test zmyslu života a Stegerov dotazník zmyslu života, Bipolárne markery veľkej päťky. Výskumný súbor tvorilo 274 slovenských a 249 maďarských univerzitných študentov. Výsledky bivariačného porovnania ukázali, že religiozita koreluje so zmyslom života v oboch výberoch, ale vyššia religiozita je asociovaná so spokojnosťou a šťastím iba v maďarskom výbere. Séria moderačných regresných analýz testujúcich trojcestné interakčné modely (religiozita x osobnostná črta x národnosť) neukázala žiadnu podporu pre celkový moderujúci efekt osobnostných čŕt. Iba slabá interakcia sa ukázala pre prívetivosť a otvorenosť v slovenskom výbere pri predikcii zmyslu života. Autori zdôrazňujú potrebu brať do úvahy kultúrny kontext vzťahu medzi religiozitou a navrhujú ďalší výskum ohľadne otázky, či môže byť religiozita považovaná za univerzálny zdroj zmyslu života v rôznych kultúrach.