



Research article

The relationship between fatalistic beliefs and well-being depends on personal and national religiosity: A study in 34 countries

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ABSTRACT

Modern social science suggests that fatalistic beliefs are generally detrimental to mental well-being because these beliefs reflect a lack of perceived efficacy and control. However, many religions downplay the role of personal agency and emphasize the importance of external factors that determine people's lives (e.g., God's will and fate). Thus, individual and cross-cultural differences in the links between fatalism and well-being are to be expected. Using a sample of 38,426 individuals from 34 countries and Bayesian multilevel modeling, this study shows that personal and national religiosity moderate the relationship between fatalism and life satisfaction. Whereas fatalism is negatively associated with life satisfaction in more secular countries and among less religious individuals, it is unrelated to life satisfaction in more religious countries and among highly religious individuals.

1. Introduction

Psychologists have extensively examined concepts related to personal agency, such as locus of control (e.g., emphasis on luck, chance, and fate), fatalism, and free will (e.g., Baumeister et al., 2010). It is widely believed that an internal locus of control that emphasizes personal influence over life circumstances is essential for positive mental health (e.g., Farnier et al., 2021). Less attention has been paid to the fact that different cultures have different conceptions of human agency and control. For example, Western cultures tend to emphasize self-determination, whereas non-Western cultures tend to recognize the importance of non-personal factors in determining life circumstances (Joshanloo et al., 2021a, 2021b). Empirical research confirms that non-Western cultures place more importance on external sources of influence such as chance, luck, and spiritual forces (Leung and Bond, 2004; Smith et al., 1995). These cultural differences are consequential. For example, Feldman et al. (2017) found that the positive relationship between free will beliefs and job satisfaction was weaker in countries with lower free will endorsement. Díaz et al. (2014) found that some of the negative effects of fatalism on well-being observed in a more individualistic Spanish sample were not observed in a more collectivistic Colombian sample.

Religious beliefs and attitudes are one aspect of culture that can put the consequences of control beliefs into perspective. Many traditional religions emphasize nonpersonal influences on life outcomes. For

example, Buddhism and Hinduism emphasize the causal influence of past actions on present life (Berniūnas et al., 2021), and Abrahamic religions emphasize the importance of God's will in determining life outcomes (Solomon, 2003). Similarly, many African religions emphasize the influence of the spirit world (e.g., the actions of the gods and ancestors) in whatever happens (Lugira, 2009). Fatalistic beliefs, then, are more in line with traditional religious ideologies. In religious cultures, it is more acceptable to hold these beliefs. In fact, some people in some of these cultures might use fatalistic beliefs as a useful strategy to adapt to difficulties in life (Díaz et al., 2014).

This study used a sample from 34 countries to examine the role of religiosity in the relationship between fatalistic beliefs (an agency-related belief) and life satisfaction (an important aspect of mental well-being). Because the study used a multilevel approach, religiosity could be included at both the personal and national levels. National religiosity reflects the importance placed on religious norms and beliefs in a person's national context, while personal religiosity reflects individuals' own beliefs and practices which can be different from the majority beliefs and practices in their nations. Research shows that personal and cultural religiosity can function differently (Gebauer and Sedikides, 2021; Joshanloo et al., 2021a, 2021b), and thus both were considered in this study. It was hypothesized that the level of personal and cultural religiosity would moderate the relationship between fatalism and well-being. Specifically, it was expected that the negative relationship between fatalism

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and well-being would be weaker for more religious individuals and cultures.

2. Methods

2.1. Participants

The study used pre-existing, publicly accessible data collected by the Pew Research Center between May and October 2019. More information on the survey methodology can be found at <https://www.pewresearch.org/our-methods/international-surveys>. Country-specific information can be found at <https://www.pewresearch.org/methodology/international-survey-research/international-methodology/all-survey/all-country/all-year>. Informed consent was obtained from all participants. The Pew Research Center adheres to the Pollster Code of Ethics as established by the American Association for Public Opinion Research and the Council of American Survey Research Organizations. The Center's mission and code of ethics can be found at <https://www.pewresearch.org/about/our-mission> and the Center's privacy policy can be found at <https://www.pewresearch.org/about/privacy-policy>. Targeting the adult population (≥ 18 years) in each country, nationally representative samples were collected using probability-based methods. The total sample consisted of 38,426 participants from 34 countries. Descriptive information is provided in Table 1.

2.2. Measures

2.2.1. Life satisfaction

To assess subjective well-being a measure of life satisfaction was used. Life satisfaction is a cognitive evaluation of one's life as a whole (Diener et al., 2012). This study used a single-item measure of present life satisfaction: "Here is a ladder representing the ladder of life. Let's suppose the top of the ladder represents the best possible life for you and the bottom the worst possible life for you. On which step of the ladder do you feel you personally stand at the present time?", rated on an 11-point Likert scale from 0 = *worst possible life* to 10 = *best possible life*.

2.2.2. Fatalism

Fatalism is "an outlook that events are controlled by external forces and humans are powerless to influence them" (Niederdeppe and Levy, 2007, p. 998). Fatalistic belief about success in life was measured in this study by asking participants to indicate their agreement with the statement "Success in life is pretty much determined by forces outside our control" on a 4-point scale ranging from 1 = *strongly agree* to 4 = *strongly disagree*.

2.2.3. Personal religiosity

Personal religiosity or religiousness is defined as "as the individual differences on being interested in and/or involved with religion" (Saroglou, 2014, p. 5). In this study personal religiosity was measured by

Table 1. Descriptive statistics.

	N	Female %	Age	Life satisfaction	Personal religiosity	Fatalism	National religiosity
Argentina	1035	57.1%	43.70	6.47	2.95	2.46	63.4
Australia	1012	46.6%	52.93	7.09	2.20	2.35	32.3
Brazil	1046	59.7%	46.38	6.95	3.77	2.50	89.4
Bulgaria	1045	58.2%	53.60	5.25	2.74	2.74	39.4
Canada	1004	46.4%	52.37	7.19	2.34	2.18	41.4
Czech Republic	1022	55.0%	50.53	6.65	1.85	2.64	25.5
France	1027	41.2%	49.82	6.54	1.98	2.49	28.8
Germany	2015	43.5%	50.66	7.05	2.41	2.58	39.5
Greece	1040	51.9%	52.42	5.66	3.21	2.71	71.3
Hungary	1030	58.1%	54.09	6.22	2.30	2.42	39.7
India	2476	42.5%	39.20	4.62	3.70	3.12	82.5
Indonesia	1212	59.2%	38.89	6.39	3.98	2.93	98.4
Israel	974	51.8%	43.16	7.18	3.10	2.68	45.0
Italy	1028	54.5%	51.25	6.51	2.68	2.47	65.2
Japan	1037	39.5%	56.92	5.76	2.22	2.63	24.8
Kenya	1019	51.1%	32.85	5.18	3.89	2.58	94.1
Lebanon	993	51.6%	42.20	4.71	3.61	2.59	85.2
Lithuania	1026	55.5%	51.47	6.26	2.57	2.53	41.2
Mexico	1028	60.1%	43.90	7.08	3.40	2.44	63.3
Netherlands	1000	48.2%	53.03	7.40	2.16	2.48	30.6
Nigeria	995	42.5%	32.32	5.92	3.92	2.79	95.1
Philippines	1035	58.2%	42.44	5.60	3.90	2.68	94.8
Poland	1030	58.7%	50.62	6.57	2.91	2.61	66.9
Russia	1039	63.7%	49.71	5.46	2.78	2.84	32.9
Slovakia	1012	52.9%	51.60	6.19	2.76	2.74	47.7
South Africa	1484	56.7%	36.44	5.82	3.79	2.87	85.1
South Korea	1006	30.4%	49.78	6.18	2.33	2.94	45.2
Spain	1069	44.2%	49.41	6.59	2.33	2.64	39.0
Sweden	1016	47.2%	57.79	7.18	1.90	2.20	18.8
Tunisia	1045	50.8%	43.51	5.06	3.91	3.14	92.3
Turkey	1046	51.7%	41.12	5.34	3.58	2.75	79.7
Ukraine	1046	62.9%	53.18	4.92	2.86	2.60	43.1
United Kingdom	1031	43.0%	53.61	6.71	2.19	2.37	29.9
United States	1503	41.5%	51.51	7.00	2.99	2.04	65.0
Total	38426	50.6%	47.36	6.16	2.95	2.62	58.1

asking each participant this question: "How important is religion in your life?". The question was answered on a 4-point scale from 1 = *very important* to 4 = *not at all important*.

2.2.4. National religiosity

National or cultural religiosity refers to the average religiosity of people within a given culture or nation (Gebauer and Sedikides, 2021). In this study, Joshanloo and Gebauer's (2020) national religiosity scores were used. These researchers used large and representative national samples of the Gallup World Poll collected over several years to determine the percentage of participants in each nation who indicated that religion is an important part of their daily lives.

2.2.5. Control variables

Age and gender (female = 1, male = 0) were used as control variables, as these variables are commonly controlled for in well-being research (e.g., Jebb et al., 2020; Joshanloo and Jovanović, 2018). Household income was also used as a control variable because low income is associated with higher religiosity (e.g., Herzer and Strulik, 2017) and an external locus of control (e.g., Maqsood and Rouhani, 1991; Straughan, 1998). Because income in each country was measured in different currencies and with a different number of categories, income quintiles were calculated within each country to measure each person's household income relative to all incomes reported in his or her country. Therefore, within each nation, individuals were divided into 5 income categories (from 1 = lowest income to 5 = highest income).

Fatalism and religiosity were reverse-coded. National averages for all variables are presented in Table 1.

2.3. Statistical analysis

Mplus version 8.7 was used for Bayesian multilevel modeling. Two Markov chain Monte Carlo chains with the GIBBS (PX1) algorithm, 5000 iterations, and Mplus default priors were used. Posterior distributions were recorded at every 30th iteration (i.e., the chains were thinned). All available data were used, and no participant was omitted because of missing data. Individual-level age, religiosity, fatalism, and income quintile were group-mean centered, while country-level religiosity was grand-mean centered (Nezlek, 2012). The intercept and slope of fatalism were specified to have random components, which were regressed on national religiosity at the country level. The convergence of the models and the quality of the posterior distributions were assessed using the potential scale reduction factor (PSRF; Gelman and Rubin, 1992) and Bayesian posterior parameter trace plots and autocorrelation plots. The PSRF of the model was 1.000, indicating convergence (Kaplan and Depaoli, 2012). Moreover, the Bayesian plots showed no issues with chain convergence and mixing (Muthén et al., 2017).

3. Results

3.1. Individual-level correlations (total sample)

Individuals with greater fatalism had lower life satisfaction ($r = -.112$), lower income ($r = -.064$), and greater religiosity ($r = .126$). Life satisfaction and religiosity were negatively correlated ($r = -.129$). Income and life satisfaction were positively correlated ($r = .215$).

3.2. Country-level correlations ($N = 34$)

Countries with higher fatalistic beliefs had lower life satisfaction ($r = -.636$) and higher levels of national religiosity ($r = .425$). Countries with higher religiosity had lower life satisfaction ($r = -.444$).

3.3. Multilevel modeling

A multilevel model was tested with all variables. At the individual level, life satisfaction was regressed on personal religiosity, personal

fatalism, and the interaction between personal religiosity and personal fatalism. Age, gender, and income were controlled for. The parameter estimates are presented in Table 2. All variables were significant predictors at the individual level and together explained 6.2% of the variance in life satisfaction at the individual level. Age and fatalism were negative predictors whereas being a woman, personal religiosity, and income were positive predictors of life satisfaction. The interaction term also made a significant contribution, suggesting that personal religiosity moderates the relationship between personal fatalism and life satisfaction. This interaction effect is shown in Figure 1, indicating that the relationship between fatalism and life satisfaction is negative at lower levels of personal religiosity but it approaches zero for individuals with higher personal religiosity. At the country level, national religiosity was a significant negative predictor of the intercept ($R^2 = 0.182$). This suggests that more religious countries were less satisfied with life. National religiosity also predicted the random slope ($R^2 = 0.398$), suggesting that national religiosity qualifies the association between personal fatalism and life satisfaction. Figure 2 shows this cross-level interaction, indicating that the association between personal fatalism and life satisfaction is negative in countries with low religiosity but it is zero in countries with higher national religiosity. Hence, both figures indicate that at lower levels of religiosity, the relationship between personal fatalism and life satisfaction is negative, whereas at higher levels of religiosity this relationship is zero.

4. Discussion

The assumption that an internal locus of control is always and universally good and an external locus of control (such as fate locus of control) is always and universally bad has been questioned by some researchers. For example, Furnham (2009) suggests that when confronted with failure, people with an internal locus of control are more likely to take responsibility for the bad consequences of their actions than people with an external locus of control, which may lead to lower self-esteem. People with an internal locus of control may also be less successful at responding to uncontrollable events than people with an external locus of control. External control beliefs, on the other hand, may be beneficial in certain contexts. For example, Stiglbauer (2016) showed that people with external control beliefs report higher well-being than people with internal control beliefs when both autonomy and time pressure are high. This finding may be due to the higher tendency to self-blame among people with an internal locus of control (Galvin et al., 2018). A country-level study showed that fatalistic beliefs were positively associated with academic achievement and economic competitiveness at the national level (Zhou et al., 2009). Hence, control beliefs may have different effects depending on contextual and personality variables. Therefore, it is important to examine the relationships between control beliefs and well-being considering potential moderators. For example, the importance of national context was highlighted in a study that showed that an external locus of control was less strongly associated with anxiety in collectivistic cultures than in individualistic cultures (Cheng et al., 2013).

To extend this line of research, the present study focused on the role of personal and national religiosity as moderators of the relationship between control beliefs and well-being. This hypothesis was based on the fact that many religions promote fatalism and beliefs in external control to varying degrees. For instance, most (if not all) religions emphasize the influence of supernatural forces (e.g., God and angels) or fate on people's lives (e.g., Berniūnas et al., 2021; Lugira, 2009; Solomon, 2003). Using multinational data, Ruiu (2013) empirically demonstrated that religiosity is associated with more fatalistic attitudes toward life, regardless of religious affiliation. Consistent with the predictions, the results of the present study showed that personal and national religiosity diminished the negative associations between fatalistic beliefs and life satisfaction. The results indicate that religious people are less dependent on perceptions of personal agency when evaluating their lives.

Table 2. Parameter estimates.

Level	Outcome	Predictor	Unstandardized	95% CI		Sig	Standardized
				Low	Up		
1	Satisfaction	Age	-0.007	-0.008	-0.005	*	-0.052
1	Satisfaction	Female	0.218	0.175	0.260	*	0.050
1	Satisfaction	Income	0.346	0.330	0.362	*	0.225
1	Satisfaction	Personal religiosity (R)	0.030	0.005	0.055	*	0.013
1	Satisfaction	Personal fatalism (F)	-0.097	-0.145	-0.049	*	-0.042
1	Satisfaction	R*F	0.052	0.025	0.078	*	0.021
2	Intercept	National religiosity	-0.014	-0.025	-0.004	*	-0.427
2	Slope	National religiosity	0.004	0.002	0.005	*	0.631

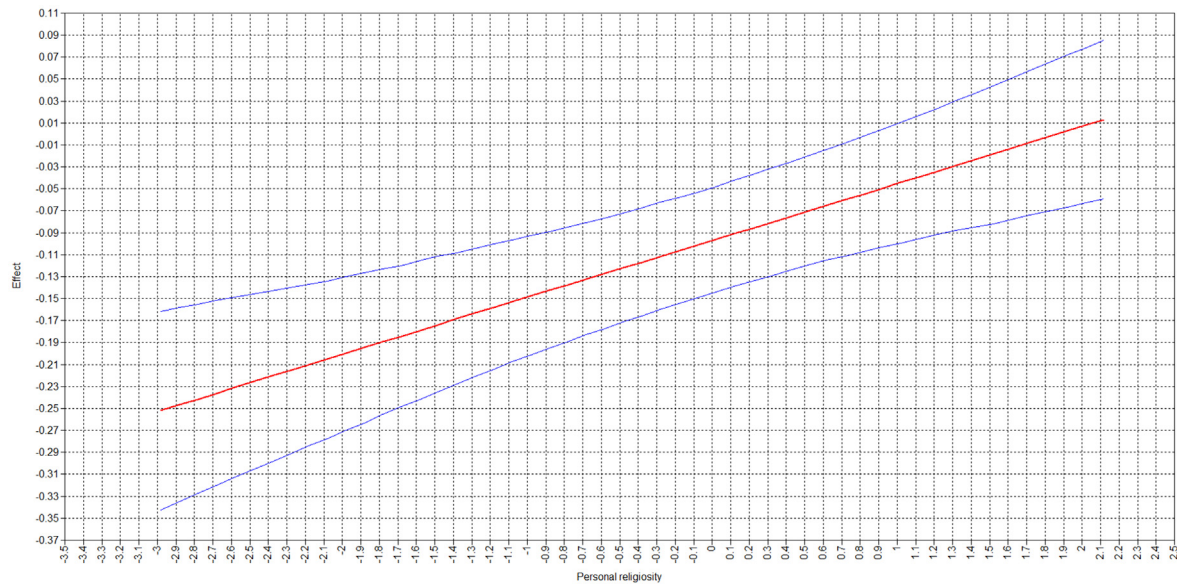


Figure 1. Personal religiosity (centered) moderates the relationship between personal fatalism and life satisfaction. The red line shows the effect of personal fatalism on life satisfaction (on the y axis) across the range of moderator values (on the x axis). The blue lines represent the credible intervals for the effects. The credible intervals for high moderator values include zero (on the y axis), indicating that the effect is not significant for individuals with very high levels of personal religiosity. For example, the plot shows that for a person with a religiosity score of -2.1, the effect of fatalism on life satisfaction would be about -.20, with a credible interval of about -.28 to -.14. Since the interval does not include zero, this effect is significant. However, for individuals with religiosity scores greater than about .9, the credible interval includes zero and the effect is not significant. Overall, the plot shows that the negative relationship between fatalism and life satisfaction weakens and reaches zero as the value of personal religiosity increases.

Why are fatalistic beliefs associated with lower life satisfaction only among more secular people and nations? Religious people and nations are more likely to acknowledge the importance of external religious factors (such as God's will and fate) in determining their life outcomes. Research shows that these religious beliefs can help in coping with stressful events (e.g., Timmins and Martin, 2019). More religious societies and people may tend to attribute their misfortunes and adverse life circumstances to external sources rather than to their own failures, thus minimizing the psychological toll of such circumstances. Consistent with this idea, recent research suggests that religiosity mitigates the psychological burden of adverse life circumstances such as income inequality and lower socioeconomic status (e.g., Berkessel et al., 2021; Joshanloo and Weijers, 2015). Fatalistic beliefs might thus be helpful when and where a religious mindset is prevalent.

Although religious individuals with fatalistic beliefs may at times discount their personal agency, they can still achieve optimal levels of self-esteem and self-efficacy by relying on benevolent spiritual forces. For example, Joshanloo and Daemi (2014) demonstrated a positive relationship between spirituality and self-esteem in Iran. In addition, religious people tend to have more access to social support from religious communities than people without such communities (Harris et al., 2014). Thus, again, higher religiosity could contribute to optimal coping by

increasing social support. In sum, fatalistic beliefs confer certain well-being benefits for religious people and these benefits may mitigate the negative influence of lack of perceived internal control. These benefits of fatalistic and religious beliefs are not available to less religious people and nations who may perceive external control as a serious obstacle to exercising personal agency and achieving personal goals.

The limitations of the study should also be acknowledged. For example, because this is a cross-sectional study, no definitive causal inferences can be made, and the present results do not allow definite conclusions about the direction of the associations between variables. Future longitudinal and/or experimental studies can shed more light on the nature of the associations between the variables examined here. As with many multinational studies, short scales were used in this study because of the time, space, and resource constraints associated with collecting large samples in a large number of countries. Therefore, the dimensionality of the variables could not be examined. Locus of control can be measured as a multidimensional construct, and different dimensions may have differential associations with criteria (Galvin et al., 2018). External sources of control could result from the influence of luck, fate, chance, powerful others, and social structures which were not distinguished here (Rotter, 1966). Future studies need to differentiate between different aspects of locus of control. Well-being also has

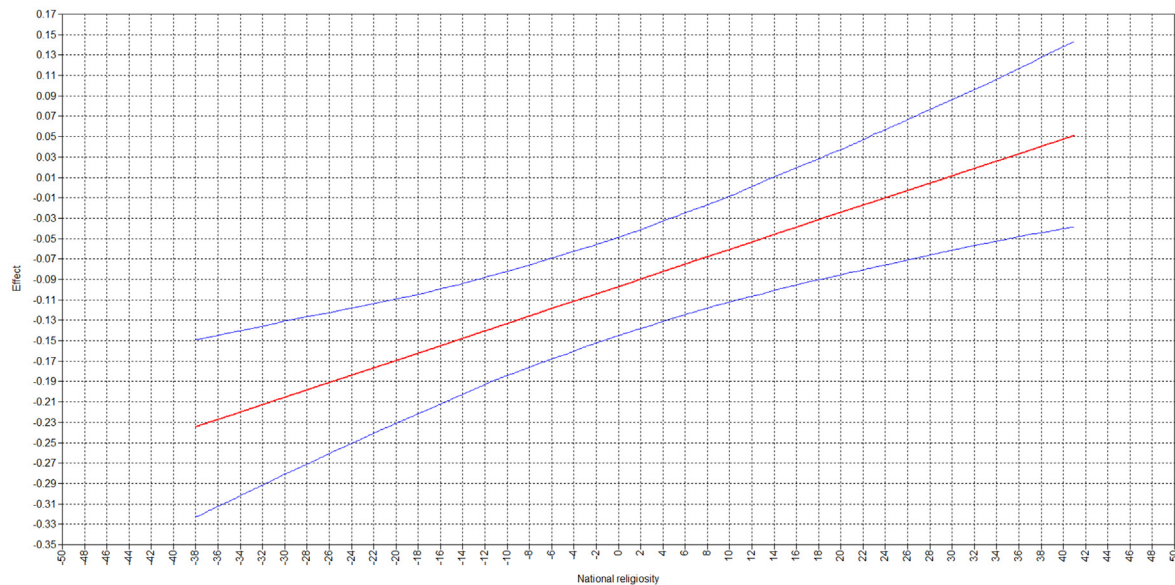


Figure 2. National religiosity (centered) moderates the relationship between personal fatalism and life satisfaction. The red line represents the effect of personal fatalism on life satisfaction (on the y axis) across the range of moderator values (on the x axis). The blue lines represent the credible intervals for the effects. The credible intervals for high moderator values include zero (on the y axis), indicating that the effect is not significant for countries with very high levels of national religiosity. For example, the plot shows that in a country with a religiosity score of -5 , the effect of fatalism on life satisfaction would be -0.12 , with a credible interval of about -0.16 to -0.06 . Since the interval does not include zero, this effect is significant. However, for countries with religiosity scores greater than about 12, the credible interval includes zero and the effect is not significant. Overall, the plot shows that the negative relationship between fatalism and life satisfaction weakens and reaches zero as the value of national religiosity increases.

affective (Diener et al., 2018), functional (Ryff, 1989), and social (Keyes, 1998) components. However, constrained by the availability of the items in the Pew survey, only life satisfaction was included in this study. Other dimensions of well-being need to be measured in future studies, to uncover possible differential associations between the variables. Despite these limitations, this study showed that both individual and national religiosity moderated the relationship between fatalistic beliefs and life satisfaction. While fatalistic beliefs were associated with poorer well-being among less religious individuals and cultures, there was no association between fatalism and life satisfaction among religious individuals and cultures. These results provide evidence for the importance of religiosity as an important personal and contextual variable that modifies the effects of control beliefs.

Declarations

Author contribution statement

Mohsen Joshanloo: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data availability statement

Data associated with this study has been deposited at <https://www.pewresearch.org/global/dataset/spring-2019-survey-data>.

Declaration of interest's statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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