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Pro-sociality and happiness across national cultures: A hierarchical linear model

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Abstract
Research from both Empirical studies and Positive Psychology has indicated that pro-sociality has a universal effect on happiness; however, this does not take into account the national or cultural differences of a given country. The hierarchical linear model (HLM) is employed in this study to investigate the link between pro-sociality and happiness at the individual level, as well as the effect of four national cultures (i.e., power distance, individualism versus collectivism, masculinity versus femininity, and uncertainty avoidance) at the country/territory level on this relationship. This study utilizes the public World Value Survey dataset, which adopts random probability representative adult samples from 32 countries or territories ($N = 53{,}618$; $M_{age} = 44.10$, $SD = 16.51$). Results suggest that pro-sociality is associated with happiness, even when accounting for demographics and the country/territory code. Additionally, the country/territory level displays variations in happiness, which can be partially explained by masculinity versus femininity (positively) and uncertainty avoidance (negatively). Moreover, the connection between pro-sociality and happiness is not influenced by national cultures. This research provides evidence for the universal happiness reward of pro-sociality. Implications, restrictions, and potential future research directions are discussed.

Keywords Pro-sociality · Happiness · National cultures · Hierarchical linear model

The World Value Survey (WVS) is a longitudinal data set that spans nearly a hundred nations and encompasses the most extensive series of happiness evaluations across countries. Drawing on research conducted using the WVS, it has been noted that the trend of happiness is generally positive in most countries, implying that people worldwide are becoming happier (Haerpfer et al., 2022). This global trend is also supported by the World Happiness Report, which provides relevant evidence on the subject (Helliwell et al., 2022). Additionally, the report highlights the rise in prosocial activities worldwide since the COVID-19 pandemic, including increased rates of donations, volunteering, and assisting strangers in 2021 compared to the baseline period of 2017–2019. Given these two global trends, the primary research question is how prosocial behavior impacts happiness.

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Pro-sociality refers to a set of attitudes, motivations, and actions that demonstrate an individual's concern for the well-being of others (Eisenberg et al., 2014). In adulthood, pro-sociality promotes growth and development, leading to the attainment of life meaning and successful aging (Bailey et al., 2021). Penner et al. (2005) have identified three levels of pro-sociality: micro, meso, and macro. The micro level pertains to an individual's prosocial tendencies, the meso level concerns the binary relationship between helpers and recipients, and the macro level encompasses prosocial behavior in groups or larger organizations. This study specifically focuses on prosocial behavior at the macro level.

Universal Happiness Reward of Pro-sociality

There is a well-documented association between pro-sociality and an increase in happiness. Numerous experimental studies have provided evidence to support the notion that engaging in pro-sociality, such as performing acts of kindness for others or the world, acknowledging the positive

impact of playing a game, and undertaking other-focused activities to improve others' moods, can all lead to greater happiness (Nelson et al., 2016; Lai et al., 2020; Titova & Sheldon, 2022a). Moreover, studies with larger sample sizes have provided further empirical findings to support the positive impact of pro-sociality on happiness, specifically in the forms of prosocial behavior and prosocial spending for others (Aknin et al., 2020; Dakin et al., 2022; Martela & Ryan, 2016). In contrast, the deficiency of prosocial behavior has the potential to decrease the level of happiness experienced by individuals (Martela & Ryan, 2020; Titova & Sheldon, 2022b). These studies consistently demonstrate that pro-sociality leads to increased positive affect and life satisfaction, as well as decreased negative affect. Additionally, systematic reviews and meta-analyses have substantiated the beneficial effect of pro-sociality, such as acts of kindness and helping others (Aknin & Whillans, 2021; Hui et al., 2020), on happiness, with a modest overall mean effect size.

The happiness reward of pro-sociality is universal across cultures. A study by Aknin et al. (2013) examined data from the Gallup World Poll conducted in 136 countries. The findings revealed that individuals from diverse cultural and economic backgrounds experienced consistent emotional benefits, particularly happiness, from engaging in prosocial spending and assisting others. Furthermore, a following experiment conducted by Aknin et al. showed that individuals who recalled spending money on others reported greater levels of happiness than those who spent money on themselves. This result was consistent across both Canada and Uganda despite their significant cultural distinctions. In a study conducted by Nelson et al. (2015), it was revealed that carrying out acts of kindness for six weeks resulted in a boost in happiness levels in both the United States and South Korea. The research also showed that there was no discernible difference in the happiness benefits of pro-sociality between the two cultures. These findings indicate that individuals can experience a consistent emotional advantage, that is, happiness, from pro-sociality, irrespective of their cultural or economic background.

The universal happiness benefit linked to pro-sociality has been identified in a small rural society, and it is not influenced by demographic variations. A study conducted by Aknin et al. (2015) explored the impact of prosocial behavior on happiness in an isolated agrarian society in Vanuatu where urban Western culture had not permeated. The findings revealed that those who engaged in prosocial behavior reported greater levels of positive emotions, such as happiness when compared to those who spent money on themselves. Lok and Dunn (2022) conducted a study that delved into the implications of demographic disparities on the correlation between prosocial spending and happiness. The relationship between charitable contributions and the individuals' subjective well-being remained consistently positive among various demographic groups, including age groups (i.e., young adults, middle-aged adults, and older adults), gender groups (i.e., males and females), and income groups (i.e., five different levels of income).

Theoretical Foundations

Following the positive psychology movement, as espoused by Seligman and Csikszentmihalyi (2014), it is posited that pro-sociality yields a universal happiness reward. Positive psychology emphasizes fostering the psychological well-being of individuals, with a focus on nurturing their health, contentment, and harmonious growth. Positive psychology has put forth several fundamental assumptions regarding the worldview, one of which is universalism (Hall et al., 2022). This idea posits that certain virtues, such as the High Six core virtues (namely, courage, humanity, justice, temperance, transcendence, and wisdom; Ruch et al., 2021), apply to all cultures and promote human flourishing. Of these six virtues, humanity is closely relevant to pro-sociality, which entails exhibiting compassion and kindness toward others. Consequently, pro-sociality can foster happiness among people on a global scale.

According to the principles of positive psychology, the cultivation of positive behaviors and experiences is crucial for the achievement of human well-being. By drawing upon positive psychology, the positive activity model has been developed as a potential tool to investigate the link between pro-sociality and happiness (Tulachan & Paudya, 2020). This model suggests that pro-sociality engagement, as a typical form of positive behavior, has the potential to enhance individuals' positive emotions and thoughts, ultimately contributing to their overall well-being and happiness. Researchers have been exploring various positive interventions aimed at promoting pro-sociality, to enhance individual well-being. For example, Carr et al. (2021) conducted a meta-analysis and found that positive psychological interventions, such as promoting kindness, had a significant impact on increasing well-being and reducing anxiety and depression. Similarly, performing kind acts through positive psychological interventions can enhance positive emotions and meaning while reducing negative emotions (Revord et al., 2018). In the field of psychotherapy, positive psychological interventions that encourage pro-sociality engagement, such as acts of kindness, can improve clients' happiness levels and alleviate psychopathological symptoms (Parks & Titova, 2016; Shin & Lyubomirsky, 2016).

Research Gaps and the Current Study

The existing literature on the universal happiness effect of pro-sociality has a few research gaps, as previous empirical studies have primarily focused on examining

the relationship between pro-sociality and happiness in different cultural settings (Aknin et al., 2013; Nelson et al., 2015) or demographic groups (Lok & Dunn, 2022), without considering the impact of national or cultural characteristics of a given country on this relationship. While some researchers have accounted for the differences between Western and Eastern nations (e.g., Gherghel et al., 2021), they have only included a limited number of representative countries. Additionally, an overwhelming majority of research studies adopting the framework of positive psychology and positive activity model have focused on individuals located in North America (Carr et al., 2021; Revord et al., 2018), with little to no inclusion of individuals from European, Asian, Australian, and African countries. This lack of diversity in research has resulted in a limited understanding of the model's applicability in different cultural contexts.

To address these gaps, this study aims to first investigate the positive relationship between pro-sociality and happiness across global countries based on WVS and then use the hierarchical linear model (HLM) to examine the moderation role of national cultures in this relationship. Specifically, the national culture framework of Hofstede (2015) is utilized in this study, which encompasses four dimensions: power distance, individualism versus collectivism, masculinity versus femininity, and uncertainty avoidance. Power distance refers to the extent to which the less powerful members of institutions and organizations within a nation accept and expect unequal power distribution. Collectivism values the collective, while individualism emphasizes the rights and concerns of each individual. Femininity stresses nurturing and caring behaviors, sexual equality, and more flexible gender roles, while masculinity promotes ambition, wealth accumulation, and defined gender roles. Finally, uncertainty avoidance describes how different cultures or communities respond to and tolerate uncertainties.

The current study will have the following contributions and implications. First, from the empirical perspective, this study is founded on empirical evidence drawn from representative countries across the globe. This approach not only provides a more diverse sample than previous studies but also fills gaps in the understanding of the role of national cultures. Second, from the theoretical perspective, positive psychology, which is based on Western society, has always sought to verify and promote the universality of certain virtues. The global cross-national focus of this study contributes to providing an empirical basis for the global scalability of pro-sociality's universality. Third, from the practical perspective, the COVID-19 pandemic has led to restrictions on international contact, making the recovery of global mental health and well-being a crucial issue for all nations. The cross-national findings of this study, which demonstrate the positive effect of pro-sociality on happiness, can assist policymakers in various countries in improving national happiness by taking people's pro-sociality into account.

Therefore, this study proposes the following hypotheses. *Hypothesis 1*: At the individual level, pro-sociality shows a positive association with happiness. *Hypothesis 2*: This association will not be moderated by variations in power distance, individualism versus collectivism, masculinity versus femininity, and uncertainty avoidance at the country level.

Method

Participants

Participants in the dataset of WVS Wave 7 (Haerpfer et al., 2022), from 32 countries or territories were used ($N = 53{,}618$). Each country or territory included more than 1000 participants, and the distribution can be seen in Appendix Table 8. Random probability representative samples of the adult population were adopted and face-to-face interviews were used to collect data. Among participants, 25,458 males and 28,114 females were included with 46 missing data. The age ranged from 17 to 103 ($M = 44.10$, $SD = 16.51$; 17–30, $n = 13{,}683$; 31–50, $n = 21{,}104$; 51–70, $n = 15{,}257$; 71–90, $n = 3417$; 90+, $n = 58$). In terms of marital status, 34,675 were married, 6397 were divorced, separated, or widowed, and 12,293 were single. The highest educational levels of participants and their parents can be seen in Table 1.

Table 1 Distribution of Respondents and Their Parental Educational Levels

	Respondent	Respondent's mother	Respondent's father
Lower	9506	23,334	21,398
Middle	26,503	19,146	19,205
Higher	17,163	5369	6453

The initial educational level was recorded by a 9-point scale: 0 = Early childhood education (ISCED 0) / no education, 1 = Primary education (ISCED 1), 2 = Lower secondary education (ISCED 2), 3 = Upper secondary education (ISCED 3), 4 = Postsecondary non-tertiary education (ISCED 4), 5 = Short-cycle tertiary education (ISCED 5), 6 = Bachelor or equivalent (ISCED 6), 7 = Master or equivalent (ISCED 7), 8 = Doctoral or equivalent (ISCED 8). ISCED 0 and 1 were transformed into a lower primary group, ISCED 2, 3, and 4 were a middle secondary group, and ISCED 5, 6, 7, and 8 were a higher tertiary group.

Measures

Happiness

Happiness was assessed by one item (see a WVS-based study, Bruni & Stanca, 2006) – "Taking all things together, would you say you are *Very happy* (= 1), *Rather happy* (= 2), *Not very happy* (= 3), or *Not at all happy* (= 4)." To make the score meaning clearer than before, this study re-coded the 4-point Likert responding scale to be: 1 = *not at all happy*; 4 = *very happy*. The higher score, the higher happiness.

Pro-sociality

Given that formal volunteering is the most frequently studied prosocial behavior form (Midlarsky et al., 2015), pro-sociality was measured by people's active membership in 12 voluntary organizations (see a WVS-based study, Lam, 2006). They are 1) church or religious organizations, 2) sports or recreational org, 3) art, music, or educational organization, 4) labor unions, 5) political parties, 6) environmental organizations, 7) professional organizations, 8) charitable/humanitarian organization, 9) consumer organization, 10) self-help group, mutual aid group, 11) women's group, and 12) other organization. Responses were using a 3-point scale (0 = *Don't belong*, 1 = *Inactive member*, 2 = *Active member*). A sum score was calculated. The higher the sum score, the higher pro-sociality (Cronbach's $\alpha = .85$).

National Cultures

Hofstede (2015) developed a framework to measure national cultures by a matrix (see Appendix Table 9), which has been widely used in empirical studies (e.g., Wallace et al., 2019; Zuva & Worku, 2018). This framework includes power distance, individualism versus collectivism, masculinity versus femininity, and uncertainty avoidance. Scores on each of them range from 0 to 100, though some scores obtained in replication studies may exceed this range.

Demographics

Demographic variables such as sex, age, marital status, and the highest educational levels of participants and their parents were also included (see a WVS-based study, Kaasa & Parts, 2008). To avoid the potential impact of these demographic variables, they were all entered as covariates in the later analysis.

Data Analysis

The HLM methodology was utilized in this study to analyze the effect of Hofstede's national cultural framework on the relationship between pro-sociality and happiness, using the large-scale WVS dataset. In the literature, a multitude of studies has employed HLM to examine the role of Hofstede's national cultural framework in human development (e.g., Song et al., 2018; Zhang et al., 2020), with some researchers adopting the WVS dataset as well (e.g., Jing & Bond, 2015). In this study, on level 1, the outcome variable was happiness, and the predictor is pro-sociality. On level 2, the four dimensions of natural cultures were entered as a continuous predictor. Level 1 predictor was group mean centered. SPSS version 27.0 was used in descriptive analysis, and Mplus version 7.4 was used in HLM analysis.

Results

To evaluate the distinctiveness of all measures, a series of confirmatory factor analyses (CFA) were carried out before the analysis. The model fit was assessed using the Comparative Fit index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). Because the happiness measure only comprised one item, pro-sociality, and national cultures were the sole factors included in the CFA analysis. Table 2 indicates that the two factors model demonstrated a considerably better model fit in comparison to the one-factor model.

Descriptive and Regression Analyses

Descriptive and correlational findings on level 1 variables can be seen in Table 3. All demographics showed associations with happiness, suggesting that they had to be controlled in the later analysis. Happiness levels exhibited a negative association with age and education levels, indicating that as individuals age and attain higher levels of education, their perceived levels of happiness decline. Independent samples test found that females ($M = 3.17$, $SD = .67$) reported higher happiness than males ($M = 3.15$, $SD = .68$; $t = 4.13$, $p < .001$). One-way ANOVA found a happiness difference across all 32 countries or territories ($F = 138.31$,

Table 2 Results of the Multilevel Confirmatory Factor Analyses

Model #	Description	χ^2	*df*	CFI	TLI	RMSEA
1	Two factors	14,505.93	103	.94	.93	.05
2	One factor	59,980.11	104	.74	.70	.11

Two factors: pro-sociality and national cultures. One factor: all items loading on the same factor.

Table 3 Descriptive and Correlational Analyses of Level 1 Variables

	1.	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*
1. Sex	–						
2. Age	$-.03^{***}$	–					
3. Education	$-.05^{***}$	$-.14^{***}$	–				
4. Education M	−.01	$-.22^{***}$	$.54^{***}$	–			
5. Education F	$-.01^{**}$	$-.18^{***}$	$.55^{***}$	$.79^{***}$	–		
6. Pro-sociality	$-.03^{***}$	$-.04^{***}$	$.07^{***}$	$.05^{***}$	$.06^{***}$	–	
7. Happiness	$.02^{***}$	$-.05^{***}$	$-.02^{***}$	$-.02^{***}$	$-.01^{**}$	$.09^{***}$	–
M	1.52	44.10	3.54	2.05	2.24	3.04	3.16
SD	.50	16.51	2.01	1.86	1.96	4.21	.67

Sex, 1 = male, 2 = female. Education M/F, the highest education levels of participants' mother and father. *M*, mean. *SD*, standard deviation. $^{**}p < .01$, $^{***}p < .001$.

$p < .001$). Post hoc tests were needed, but only descriptive findings are displayed in Appendix Table 10 due to presenting all post hoc tests was redundant. Importantly, pro-sociality had a positive correlation with happiness. Further linear regression analysis indicated that after controlling these demographics and the country/territory code ($\Delta R^2 = 1.4\%, p < .001$), pro-sociality still predicted happiness ($\beta = .08, t = 17.43, p < .001$; $\Delta R^2 = .6\%$, $p < .001$).

HLM Analysis

HLM was employed to examine the impact of national cultures at the country/territory level on the association between pro-sociality and happiness at the individual level. Four models were constructed for each national culture at level 2, wherein pro-sociality served as the predictor, national cultures as the moderator, happiness as the outcome variable, and demographics as the covariates. Model 1 examined whether the intercept (i.e., happiness level) difference existed at level 2; Model 2 examined whether the intercept difference could be predicted by the level 2 variance; Model 3 examined whether the slope (i.e., the effect of pro-sociality on happiness) difference existed at level 2; Model 4 examined whether the slope difference could be predicted by the level 2 variable (i.e., national cultures).

Tables 4, 5, 6, and 7 showcase the fixed and random effects for the four national cultures. Fixed effects models are used to estimate the relationships between variables at the population level, whereas random effects models are employed to estimate the variability in those relationships across individuals or groups. The model fitting indices, namely AIC and BIC, for all models are also displayed. In Model 1 of all analyses, it was observed that the average level of happiness varied across countries or territories ($ps < .001$). Furthermore, Model 2 analyses revealed that this happiness disparity at level 2 was marginally influenced by masculinity versus femininity (positively) and uncertainty avoidance (negatively) ($ps < .10$). The results of Model 3 indicated that there was no significant difference in the relationship between pro-sociality and happiness across various countries or territories ($ps > .05$). Additionally, Model 4 analyses revealed that the four distinct national cultures at level 2 did not have any impact on the slope ($ps > .05$), suggesting that the association between pro-sociality and happiness was not influenced by national cultures. The role of demographics was found to be linked to the participants' educational background, which consistently predicted lower levels of happiness.

Discussion

The present study utilized HLM to investigate the association between pro-sociality and happiness, while also exploring how this relationship is influenced by four distinct national cultures. The findings demonstrate a significant link between pro-sociality and happiness, which remained consistent even after controlling for demographic variables and country/territory code. Hypothesis 1 was supported. Moreover, the country/territory level analysis revealed notable variations in happiness, which may be partly attributable to differences in individualistic versus collectivist cultural norms. Finally, the relationship between pro-sociality and happiness was shown to be unaffected by the country/territory of origin. Hypothesis 2 was also supported.

The present study's findings indicate a robust association between pro-sociality and happiness, which is consistent with previous studies, meta-analyses, and systematic reviews. For example, in a study conducted by Rowland and Curry (2019), participants engaged in acts of kindness over seven days increasing subjective happiness. The study found that the positive relationship between these acts and happiness was consistent regardless of the recipient or whether

Table 4 HLM Results of the Fixed and Random Effects for Power Distance

Models		Model 1		Model 2		Model 3		Model 4	
		B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Fixed effect									
Predictors of happiness	Intercept	3.55	.54***	3.69	.59***	2.22	.99*	2.48	.83**
	Power distance			−.001	.00			−.01	.01
	Sex	.06	.22	.07	.22	.94	.61	1.36	.80†
	Age	.00	.01	−.001	.01	−.01	.01	−.01	.01
	Education	−.21	.05***	−.22	.05***	−.15	.07*	−.14	.08†
	Education F	−.01	.12	.02	.13	−.03	.13	.05	.14
	Education M	.12	.11	.09	.12	.10	.11	.01	.12
Predictor of slope	Intercept (slope)							−.55	.45
	Power distance							.01	.01
Random effect	Level 1 variance	1.13	.43**	1.13	.43**	.94	.30**	.94	.30**
	Level 2 variance	.03	.01***	.03	.01***	.18	.23	.33	.41
	Level 2 slope					.67	.44	.62	.37†
Model fit	AIC	1,290,306.58		1,290,295.11		1,281,170.27		1,281,156.77	
	BIC	1,290,430.68		1,290,428.07		1,281,312.10		1,281,316.33	

"Level 1 variance" means variance in happiness at the individual level, "Level 2 variance" means variance in happiness at the country level, and "Level 2 slope" means variance in slope at the country level.

†$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$

Table 5 HLM Results of the Fixed and Random Effects for Individualism

Models		Model 1		Model 2		Model 3		Model 4	
		B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Fixed effect									
Predictors of happiness	Intercept	3.36	.51***	3.37	.52***	2.86	.98**	1.78	1.13
	Individualism			.00	.00			.01	.01
	Sex	.15	.21	.16	.23	.88	.59	1.13	.65†
	Age	.001	.01	.02	.17	−.01	.01	−.01	.01
	Education	−.20	.05***	−.70	.17***	−.13	.07†	−.13	.08†
	Education F	−.01	.12	−.02	.26	.01	.13	−.06	.16
	Education M	.10	.10	.28	.29	.03	.11	.09	.11
Predictor of slope	Intercept (slope)							.59	.37
	Individualism							−.01	.01
Random effect	Level 1 variance	1.13	.43**	1.13	.43**	.94	.30**	.94	.30*
	Level 2 variance	.03	.01***	.03	.01***	2.63	1.81	.23	.28
	Level 2 slope					.67	.44	.61	.36†
Model fit	AIC	1,290,303.93		1,290,285.55		1,281,166.71		1,281,150.00	
	BIC	1,290,428.03		1,290,418.51		1,281,308.54		1,281,309.55	

†$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$

the acts were observed. Similarly, a meta-analysis conducted by Curry et al. (2018) on 27 studies demonstrated a small to medium effect of kindness on the actor's happiness. Moreover, Galante et al. (2014) conducted a meta-analysis and systematic review of 22 studies to assess the effectiveness of kindness-based meditation programs in improving people's well-being. The results of this research showed that techniques such as loving-kindness meditation and compassion meditation had a moderate effect in augmenting positive emotions and reducing negative emotions, such as depression.

Table 6 HLM Results of the Fixed and Random Effects for Masculinity

Models		Model 1		Model 2		Model 3		Model 4	
		B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Fixed effect									
Predictors of happiness	Intercept	3.56	.54***	3.60	.54***	2.22	.99*	1.24	1.12
	Masculinity			.004	.002†			.01	.01
	Sex	.06	.22	−.03	.23	.94	.61	1.42	.62*
	Age	.00	.01	−.002	.01	−.01	.01	−.01	.01
	Education	−.21	.05***	−.22	.05***	−.15	.07*	−.11	.07†
	Education F	−.01	.12	−.04	.11	−.03	.13	−.09	.12
	Education M	.12	.11	.15	.10	.10	.11	.14	.10
Predictor of slope	Intercept (slope)							.36	.63
	Masculinity							−.003	.01
Random effect	Level 1 variance	1.13	.43**	1.13	.43**	.94	.30**	.94	.30**
	Level 2 variance	.03	.01***	.03	.01***	.18	.23	.47	.50
	Level 2 slope					.67	.44	.67	.43
Model fit	AIC	1,290,306.58		1,290,303.68		1,281,170.27		1,281,165.92	
	BIC	1,290,430.68		1,290,436.65		1,281,312.10		1,281,325.47	

†$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$

Table 7 HLM Results of the Fixed and Random Effects for Uncertainty Avoidance

Models		Model 1		Model 2		Model 3		Model 4	
		B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Fixed effect									
Predictors of happiness	Intercept	3.55	.54***	3.72	.54***	2.22	.99*	2.63	.77**
	Uncertainty avoidance			−.002	.001†			−.01	.00
	Sex	.06	.22	.04	.21	.94	.61	.89	.50†
	Age	.00	.01	.00	.01	−.01	.01	−.004	.01
	Education	−.21	.05***	−.23	.05***	−.15	.07*	−.17	.06**
	Education F	−.01	.12	−.003	.11	−.03	.13	−.02	.12
	Education M	.12	.11	.13	.10	.10	.11	.11	.11
Predictor of slope	Intercept (slope)							−.21	.30
	Uncertainty avoidance							.01	.01
Random effect	Level 1 variance	1.13	.43**	1.13	.43**	.94	.30**	.94	.30**
	Level 2 variance	.03	.01***	.03	.01***	.18	.23	.16	.18
	Level 2 slope					.67	.44	.65	.40
Model fit	AIC	1,290,306.58		1,290,301.67		1,281,170.27		1,281,166.03	
	BIC	1,290,430.68		1,290,434.63		1,281,312.10		1,281,325.59	

†$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$

The impact of masculinity versus femininity and uncertainty avoidance on the variation in happiness levels across countries was discovered to be of marginal significance. This has been a topic of discussion in the social sciences, with some scholars suggesting that "approaching significance" can be used to interpret the marginal significance (e.g., Blake & Gangestad, 2020; Salvador et al., 2020), while others argue that the established statistical significance standard should be applied and that findings of marginal significance are not statistically significant (e.g., Olsson-Collentine et al., 2019). Given the precarious level of statistical significance, it is advisable to conclude that masculinity versus femininity and uncertainty avoidance do not serve as predictors of the differences in happiness levels among countries.

Recent studies have indicated that pro-sociality has a universal impact on happiness. This is supported by the self-determination theory, which emphasizes the fundamental psychological needs of relatedness, competence, and autonomy (Ryan & Deci, 2017). Moreover, beneficence, which refers to a subjective sense of doing something beneficial for others, has been proposed as an alternative basic need that is universal. Martela and Ryan (2016) discovered that these four needs collectively contributed uniquely to happiness. Titova and Sheldon (2022b) found that when beneficence was lacking, individuals reported negative effects such as low enjoyment and satisfaction. Furthermore, a cross-cultural study involving participants from Japan, Romania, and the United States (Gherghel et al., 2021) found that engaging in prosocial behavior was positively associated with subjective well-being across all three countries. This provides additional evidence of the universal happiness effect of pro-sociality.

Theoretical and Managerial Implications

The current study has important implications for both theoretical and managerial perspectives on the universality of pro-sociality across different national cultures. The sociocultural theory emphasizes the influence of social and cultural environments on human behavior, suggesting that behavior is shaped by various contextual factors (Enciso, 2020). This theory posits that human development is a socially-mediated phenomenon that varies based on cultural differences. Culture plays a crucial role in shaping human development, impacting how individuals acquire knowledge, communicate, and assimilate significant beliefs or values. However, this research has demonstrated that pro-sociality is a universal trait that transcends cultural boundaries, in line with the principles of positive psychology. This finding supports the idea that certain positive attributes are universally present in individuals' pursuit of happiness, as proposed by humanism and existentialism (Robbins, 2021).

From the perspective of management implications, the study focuses on the impact of cultural orientation, specifically masculinity versus femininity and uncertainty avoidance, on happiness levels across different countries. The outcomes indicate that an individual's cultural orientation has the potential to act as an indicator of their happiness, which corresponds with the findings of prior researchers (e.g., Muresan et al., 2020; Rajkumar, 2023). The study reveals that masculinity has a slightly stronger association with happiness than femininity, and higher levels of uncertainty avoidance are linked to lower levels of happiness. Policymakers and government officials can utilize their country's cultural orientation to promote national happiness. However, the study also highlights a negative correlation between education levels and happiness, indicating that individuals with higher education may be more susceptible to mental health issues such as depression and anxiety, and therefore require greater attention.

Theoretically, self-determination theory has the potential to explore the relationship between pro-sociality and happiness by examining the mediation and moderation roles of three basic needs. At the individual level, engaging in prosocial behavior can promote well-being by satisfying the needs for autonomy, competence, and relatedness (Gherghel et al., 2021; Titova & Sheldon, 2022a). At the interpersonal level, higher levels of basic psychological need satisfaction can strengthen the connection between prosocial behavior and well-being. Individuals who have higher levels of satisfaction of these basic needs tend to experience greater happiness from engaging in prosocial behavior (Cash et al., 2022; Moche & Västfjäll, 2022). From a practical standpoint, this theoretical perspective sheds light on the psychological mechanism and individual variations in the positive correlation between pro-sociality and happiness. This can inform the development of intervention programs aimed at enhancing well-being, such as those that encourage greater engagement in prosocial behavior and promote the satisfaction of basic needs. Such efforts can lead to collective improvements in well-being. Additionally, charitable organizations and policymakers can use this information to evaluate their current strategies for soliciting donations, ensuring that they respect people's autonomy, competence, and relatedness when seeking charitable contributions.

Limitations and Future Directions

This study should be noted for its limitations. Firstly, due to the large sample size of participants from 32 countries or territories, the findings may be statistically significant even for small correlations. Therefore, the effect size should be taken into consideration when evaluating the relationship between pro-sociality and happiness (e.g., Song et al., 2020; Unanue et al., 2021). Secondly, social

desirability cannot be ignored (Stavrova, 2019), as evidenced by the small range from 2.78 to 3.50 on a 4-point Likert scale in the measurement of happiness, which manifests a ceiling effect. This limits the capture of variations in people's happiness and future studies should consider including more well-being indicators (Steenkamp et al., 2021), such as life satisfaction. Lastly, the WVS Wave 7 dataset used in this study is cross-sectional and thus cannot explain the causality of pro-sociality on happiness. The longitudinal methodology (e.g., Son & Padilla-Walker, 2020; Unanue et al., 2021) should be employed to clarify the causality and evaluate how long the effect of pro-sociality on happiness lasts.

The present study makes a valuable contribution to the field of research in the following distinct ways. Firstly, it solely investigates four representative national cultures and fails to take into account the two recently developed cultural orientations, namely, long-term versus short-term orientation and indulgence versus restraint (Chudnovskaya & O'Hara, 2022; Hofstede & Minkov, 2010). As Guo et al. (2018) have already studied the impact of these two cultural orientations on prosocial behavior at the national level, future research must incorporate them in the HLM analysis based on the framework of this study. Moreover, it is worth noting that the relationship between pro-sociality and happiness is not unidirectional. Various studies have demonstrated the existence of a positive feedback loop between these two constructs (e.g., Hui, 2022; Layous et al., 2017). Specifically, engaging in prosocial acts can elicit a sense of happiness, which in turn reinforces further prosocial behavior and fosters positive affect. To further advance our understanding of this phenomenon, future research should explore whether this reciprocal relationship holds across diverse cultural contexts. Additionally, interventions informed by these findings could be developed to promote pro-sociality development and enhance mental well-being.

Secondly, the current research on the relationship between pro-sociality and happiness is limited to the perspective of the actor, and therefore, it is necessary to consider the recipient's viewpoint. Recent studies have focused on the positive impact of engaging in prosocial behavior on the well-being of partners in romantic relationships (Li et al., 2022) and the influence of social connections on the happiness of individuals who receive prosocial behavior (Zhang et al., 2018, 2021). Future research should incorporate the recipient's perspective (Streit et al., 2020), as prosocial behavior involves a positive social exchange that requires equitable consideration of both the giver and the receiver. Additionally, it would be valuable to investigate whether the impact of receiving prosocial behavior on the beneficiary's well-being is universal across cultures, using the same methodology as this study.

Thirdly, it is imperative to consider the diverse subcategories, types, and gauges of pro-sociality and well-being. Recently, a review article has illuminated how happiness can be nurtured through a variety of prosocial behaviors, such as charitable giving, volunteering, blood or organ donation, advice-giving, and food-sharing (Aknin & Whillans, 2021). Hui and Kogan (2018) have also examined the relationship between prosocial behavior and well-being, taking into account the mixed roles of state-like rather than trait-like need satisfaction. Furthermore, Martela and Ryan (2020) and Hui and Kogan (2018) have differentiated between overall and situational well-being, as well as hedonic and eudaimonic well-being. Significantly, a meta-analysis by Hui et al. (2020) has concluded that prosocial behavior has a stronger correlation with eudaimonic well-being than with hedonic well-being. Therefore, the correlation between pro-sociality and well-being may vary according to the operational definitions employed, which warrants further exploration in future research.

Conclusions

Across 32 countries or territories in the World Value Survey dataset, pro-sociality, as measured by active participation in voluntary organizations, is strongly correlated with individual happiness. At the cultural level, analysis using hierarchical linear modeling suggests differences in happiness levels between countries, which can be partially attributed to masculinity versus femininity and uncertainty avoidance in Hofstede's framework of national cultures. Despite these cultural differences, the positive association between pro-sociality and happiness remains consistent, indicating a universal happiness reward of pro-sociality.

Appendix

Table 8 The Distribution of Participants across Countries or Territories.

Country	Frequency	Percent	Country	Frequency	Percent
United States of America	2596	4.8	Turkey	2415	4.5
Canada	4018	7.5	China (Mainland)	3036	5.7
Mexico	1739	3.2	Taiwan, China	1223	2.3
Guatemala	1203	2.2	Hong Kong, China	2075	3.9
Colombia	1520	2.8	South Korea	1245	2.3
Ecuador	1200	2.2	Japan	1353	2.5
Peru	1400	2.6	Pakistan	1995	3.7
Brazil	1762	3.3	Bangladesh	1200	2.2
Chile	1000	1.9	Thailand	1500	2.8
Argentina	1003	1.9	Vietnam	1200	2.2
Germany	1528	2.8	Malaysia	1313	2.4
Serbia	1046	2.0	Singapore	2012	3.8
Greece	1200	2.2	Philippines	1200	2.2
Romania	1257	2.3	Indonesia	3200	6.0
Russia	1810	3.4	Australia	1813	3.4
Iran	1499	2.8	New Zealand	1057	2.0

Table 9 Dimension Data Matrix in the Hofstede National Culture Framework (Version 2015).

Countries	Power distance	Individualism versus collectivism	Masculinity versus femininity	Uncertainty avoidance
USA	40.00	91.00	62.00	46.00
Canada	39.00	80.00	52.00	48.00
Mexico	81.00	30.00	69.00	82.00
Guatemala	95.00	6.00	37.00	101.00
Colombia	67.00	13.00	64.00	80.00
Ecuador	78.00	8.00	63.00	67.00
Peru	64.00	16.00	42.00	87.00
Brazil	69.00	38.00	49.00	76.00
Chile	63.00	23.00	28.00	86.00
Argentina	49.00	46.00	56.00	86.00
Germany	35.00	67.00	66.00	65.00
Serbia	86.00	25.00	43.00	92.00
Greece	60.00	35.00	57.00	112.00
Romania	90.00	30.00	42.00	90.00
Russia	93.00	39.00	36.00	95.00
Iran	58.00	41.00	43.00	59.00
Turkey	66.00	37.00	45.00	85.00
China (Mainland)	80.00	20.00	66.00	30.00
Taiwan, China	58.00	17.00	45.00	69.00
Hong Kong, China	68.00	25.00	57.00	29.00
South Korea	60.00	18.00	39.00	85.00
Japan	54.00	46.00	95.00	92.00
Pakistan	55.00	14.00	50.00	70.00
Bangladesh	80.00	20.00	55.00	60.00
Thailand	64.00	20.00	34.00	64.00
Vietnam	70.00	20.00	40.00	30.00
Malaysia	104.00	26.00	50.00	36.00
Singapore	74.00	20.00	48.00	8.00
Philippines	94.00	32.00	64.00	44.00
Indonesia	78.00	14.00	46.00	48.00
Australia	38.00	90.00	61.00	51.00
New Zealand	22.00	79.00	58.00	49.00

Table 10 The Description of Happiness Levels across Countries or Territories.

Country	*M*	*SD*	Country	*M*	*SD*
United States of America	3.12	.64	Turkey	3.06	.65
Canada	3.05	.62	China (Mainland)	3.15	.63
Mexico	3.50	.66	Taiwan, China	3.14	.62
Guatemala	3.41	.69	Hong Kong, China	2.89	.60
Colombia	3.45	.72	South Korea	2.93	.39
Ecuador	3.50	.72	Japan	3.20	.62
Peru	3.17	.73	Pakistan	3.35	.74
Brazil	3.17	.61	Bangladesh	3.17	.60
Chile	3.11	.64	Thailand	3.15	.70
Argentina	3.19	.65	Vietnam	3.45	.57
Germany	3.16	.63	Malaysia	3.03	.60
Serbia	2.96	.64	Singapore	3.14	.62
Greece	2.79	.80	Philippines	3.42	.67
Romania	2.94	.69	Indonesia	3.37	.63
Russia	2.98	.59	Australia	3.22	.61
Iran	2.78	.86	New Zealand	3.27	.58

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Data Availability The datasets generated during and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Declarations

Compliance with Ethical Standards All procedures involving human participants were following the ethical standards of the Institutional Review Board and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants.

Conflict of Interest The author(s) declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

Conflicting Interests None.

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