

COVID-19 cases correlate with greater acceptance coping in flexible cultures: A cross-cultural study in 26 countries

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Abstract

The current study examines whether the prevalence of COVID-19 cases and cultural flexibility correlate to one's use of acceptance coping across 26 cultures. We analyzed data from 7476 participants worldwide at the start of the first outbreak from March 2020 to June 2020. Results showed that cultural flexibility moderated the relationship between COVID-19 cases and individuals' acceptance coping strategies. Specifically, for cultures with high flexibility, COVID-19 cases correlated with more acceptance coping; for cultures with low flexibility, COVID-19 cases correlated with less acceptance coping. This result demonstrates how participants from flexible cultures can coexist with the realistic challenges and suffering faced during this pandemic.

KEYWORDS

acceptance coping, cultural flexibility, COVID-19 prevalence

1 | INTRODUCTION

COVID-19 has caused immense suffering worldwide, and people in different cultures have reacted differently. While some have accepted and learned to live with the situation, others have struggled. This study aims to investigate how the prevalence of COVID-19 and a new cultural trait, cultural flexibility, influence coping strategies across cultures.

2 | THE RELATIONSHIP BETWEEN COVID-19 CASES AND COPING STRATEGIES

The way people coped with the sudden increase in COVID-19 cases at the start of the pandemic is still an area of research that deserves attention. Previous studies have shown that people living in areas with a high prevalence of COVID-19 cases often experience higher stress levels (Green et al., 2021). Coping strategies can help reduce the adverse effects of stressful situations, particularly when applied appropriately (Bamuhair et al., 2015). Coping also lessens feelings of distress from negative experiences by using mental and behavioral strategies to manage stress-related issues (Carver, 2013; Tuason et al., 2021). Acceptance coping is a widely adopted coping strategy that aims to help individuals adapt to the situation rather than actively control or change it (Polizzi et al., 2020). Instead, people adjust some aspects of themselves and accept the circumstances as they are (Fisher et al., 2021). This type of secondary control coping contrasts with primary control coping, which involves attempts to control the stressor itself (English & Zhang, 2020; Gaudreau, 2018).

Although using different coping strategies under different stress levels has been well-researched, the results have not always been consistent. While some studies found that stress was negatively related to acceptance or other secondary "fit" coping strategies (i.e., fitting oneself into situations instead of influencing situations), other studies found contradictory or non-significant results. For instance, Labrague et al. (2018) found that stress was negatively related to secondary control coping (i.e., staying optimistic) in a sample of nursing students from Greece, the Philippines, and Nigeria. In contrast, another study found the relationship between distress and secondary coping was positive in East Asian Canadians but non-significant in European Canadians (Han et al., 2022).

The early days of the global pandemic provide a unique opportunity to explore the relationship between COVID-19 cases and individual-level coping strategies. Baloch et al. (2021) found no significant relationship between stress during COVID-19 and acceptance coping in a sample of college students in Pakistan. Alongside the aforementioned studies that found inconsistent results from different cultural samples (i.e., participants from Greece, the Philippines, Nigeria, Canada, and Pakistan), the inconsistency between stress and acceptance coping could be attributed. Another reason for the observed inconsistencies maybe the different contexts in which the data were collected. For example, Italy was one of the countries most affected by the Covid-19 pandemic, especially at the beginning. Paolini et al. (2022) found, with a sample of non-students during the lockdown period, that activating broader and therefore more flexible social identification, such as with all of humanity, led to greater trust towards social and political actors. This, in turn, can help individuals reduce the stress caused by the restrictive conditions during the Covid-19 lockdown.

It is possible that some cultures enable while others hinder acceptance coping to manage the high stress triggered by this pandemic. This study proposes that flexibility-monumentalism, a cultural trait, could potentially moderate the relationship between the prevalence of COVID-19 cases and the usage of acceptance coping, providing an explanation for the inconsistency in previous findings.

3 | FLEXIBLE SOCIETIES MODERATE THE LINK BETWEEN COVID-19 CASES AND ACCEPTANCE COPING

Flexibility-monumentalism, or flexibility for short, is a newly discussed cultural trait proposed by Minkov et al. (2018). The authors postulate that cultures with higher levels of flexibility exhibit a stronger ability to coexist with suffering and discomfort, and individuals in these cultures reflect a flexible and practical ability to adjust to different situations. For example, East Asian cultures tend to have greater flexibility, while cultures with higher levels of monumentalism tend to hold unalterable values and beliefs. Individuals in these cultures tend to prefer self-consistency across contexts and situations and prefer to satisfy their desires instead of suppressing them. Cultures in Latin America and Africa tend to have greater monumentalism.

Because flexible cultures tend to encourage people to live with suffering, it is possible that these cultures can more easily accept the increasing severity of COVID-19. Research has shown that countries in East Asia performed better with fewer COVID-19 cases and less COVID-19 related deaths compared to the rest of the world (Talhelm et al., 2023). Another relevant study found that societal levels of flexibility were positively related to the reduction in mortality in COVID-19 (Li et al., 2022). Previous studies also found that Eastern cultures favor secondary control coping more than Western cultures (Han et al., 2022), and that secondary coping functions better in Asian cultures than in Western cultures (Szabo et al., 2017).

Therefore, we hypothesize that cultural flexibility moderates the link between COVID-19 cases and acceptance coping. Specifically, for cultures with high flexibility, situations with more COVID-19 cases correlate to more acceptance coping, while for cultures with low flexibility, situations with more COVID-19 cases correlate to less acceptance coping.

4 | METHOD

4.1 | Participants

This research is affiliated with a larger project that received ethical approval from the affiliated University (Research Project Protocol # 2020-UNI-0211). The current research recruited participants from around the world through a Global COVID-19 Online Survey. It was conducted by the Shanghai International Studies University IC Institute in collaboration with researchers around the world during the first wave of the pandemic. Participants joined this study



FIGURE 1 The map of 26 cultures involved in formal analyses.

through Qualtrics. Participation in this research was voluntary. At first, we recruited 9702 participants from 99 countries from March 2020 to June 2020. To follow the General Data Protection Regulation, we excluded the participants who were under 18 years old. In addition, in order to get valid results, we only included countries with at least 30 participants, had flexibility scores from Minkov et al. (2018), and have records of daily COVID-19 cases at the time of data collection. In the end, 7476 participants ($M_{\text{age}} = 31.86$, $SD_{\text{age}} = 12.97$, 60.42% female) from 26 cultures (see Figure 1) were included in the final analyses. The details about the demographic information by culture are presented in Table S2 in supplemental materials.

4.2 | Measurements

4.2.1 | Coping strategies

Acceptance coping was measured by 3 items using a coping strategy scale (brief COPE; Carver, 1997). An example item is: "I accept the fact that this happened." Participants rated the items from 1 (*won't do this*) to 4 (*often do this*). The brief COPE consists of 8-item, with 3 items measuring acceptance coping and 5 items measuring adaptive coping (see Table S5 and Figure S1 in online supplemental materials). The two-factor solution of the brief COPE fits the data best across cultures because this factor structure, with two correlated factors, achieved measurement invariance across countries (refer to Table S6 in the supplementary materials). McDonald's Omega for acceptance coping was 0.74.

4.2.2 | Cultural flexibility versus monumentalism

The flexibility versus monumentalism country scores were from Minkov et al. (2018). The scores were derived from seven items that each contained three options: 1 for monumentalism (e.g., I have strong values and beliefs that guide my behavior in most situations), 2 for neutral, and 3 for flexibility (e.g., My behavior is contingent on the situation, less influenced by my values and beliefs). Factor analysis of these items per country yielded a "flexibility" versus "monumentalism" unifactorial solution. Factor scores, multiplied by 100, represent country scores; higher scores indicate

more flexibility and lower monumentalism. For example, the score for Japan is 234, while the score for Italy is -36. All scores are presented in the supplemental materials.

4.2.3 | New cases per million population

To measure the prevalence of COVID-19 cases, we collected cases of COVID-19 per million population. We collected the number of new confirmed cases (7-day smoothed) based on each participants' response dates and their current country from Hasell et al. (2020)'s work. Specifically, we averaged the number of new cases per million population on the response day and 6 days before.

4.2.4 | Covariates

Since previous research has found that age, gender, education level, national collectivism and individualism, and financial resources, were related to one's coping style (e.g., Baloch et al., 2021; Kuo, 2013; van Deurzen et al., 2015), this study collected such data and analyzed them as covariates. Additionally, we controlled for the Stringency Index, historical pathogens, the number of people in the household, and population density because they may be related to the spread and severity of COVID-19 (e.g., Wong & Li, 2020). The stringency index gauges the strictness of governmental COVID-19 policies, such as travel bans and school closures. It is controlled for because countries differ in policy strictness, as well as collectivism since it is known to influence mask-wearing behaviors (Lu et al., 2021). Historical pathogens measure a population's long-term infectious disease prevalence, which was controlled for to exclude its effects when analyzing contemporary reactions to COVID-19. These are common covariates in previous COVID research (e.g., English et al., 2022). The details about the covariates are presented in Table S1 in supplemental materials.

5 | RESULTS

The descriptive results are displayed in Table 1. The details about the descriptive statistics of main variables by culture are presented in Table S3 in supplemental materials. Since our dataset consists of two levels: individual level and culture level, we examined whether this dataset is suitable for a multilevel approach. Thus, we calculated the intraclass correlation (ICC) for acceptance coping score in the model which only include a random intercept. The ICC was 0.07, indicating that 7% of the variation in review score was due to between-culture variation. LeBreton and Senter (2008) have suggested that $ICC > 0.05$ indicating the necessity of multilevel modeling. Therefore, we conducted multilevel analyses using the nlme package in R (Pinheiro et al., 2010). We tested a multilevel model with grand-mean centered cultural flexibility, new cases per million, and their interaction term, the society-mean-centered new cases per million, and the interaction with grand-mean centered cultural flexibility. All grand-mean centered and society-mean centered control variables are included in Table 2. Although new cases per million and stringency index are society-level variables, they were reported daily and thus varied depending on the participants' survey completion date. Therefore, they are also society-mean centered estimates. All covariates and their corresponding centered estimates were included in this regression model (refer to Table 2). We also ran a regression model for adaptive coping, please refer to Table S7 in the online supplementary materials.

Results showed that only the interaction effect between grand-mean centered cultural flexibility and new cases was significant (see Figure 2), $B = 0.00007$, $SE = 0.00002$, 95% CI = [0.00003, 0.0001], $p < 0.001$. This suggests that an increase in COVID-19 cases interacted with the level of cultural flexibility, affecting individuals' coping acceptance.

TABLE 1 Means, standard deviations, and correlations among variables (N = 7476).

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Acceptance coping	3.28	0.69	(0.74)												
2. Flexibility	4.87	83.8	0.01	--											
3. New cases per million	35.9	39.33	-0.03**	-0.11**	--										
4. Gender	0.64	0.48	0.01	0.05**	0.04**										
5. Age	31.86	12.97	0.03**	0.11**	0.14**	0.4**	--								
6. Education level	4.56	1.53	0.13**	0.12**	-0.08**	0.01	0.23**	--							
7. Stringency index	77.4	14.22	0.01	-0.40**	0.16**	-0.09**	0.02	0.12**	--						
8. Hofstede's individualism	54.32	26.12	0.07**	0.16**	0.30**	0.08**	0.07**	-0.13**	-0.18**	--					
9. Gini	38.81	8.28	-0.10**	-0.66**	0.04**	0.02	-0.08**	-0.12**	0.17**	-0.14**	--				
10. GDP per capita (US\$)	30,499.13	16,009.38	0.09**	0.38**	0.32**	0.08**	0.12**	-0.10**	-0.42**	0.74**	-0.46**	--			
11. Pathogens per culture	0.19	2.02	-0.12**	-0.44**	-0.23**	-0.02*	-0.17**	0.03*	0.26**	-0.69**	0.64**	-0.78**	--		
12. Population density	160.82	142.92	0.01	0.48**	-0.33**	0.01	0.01	0.15**	0.09**	0.01	-0.41**	-0.12**	-0.13**	--	
13. People in household	3.4	1.75	-0.04**	-0.14**	-0.17**	-0.02	-0.21**	-0.09**	0.09**	-0.13**	0.23**	-0.24**	0.23**	0.02	--

Note: Gender: 0 = male, 1 = female. Education: 1 = below high school to 7 = doctoral or equivalent. Spearman correlation was used to the correlation between gender and the rest variables. The reliability was reported in the diagonal line.

* $p < 0.05$, ** $p < 0.01$.

TABLE 2 Regression model for acceptance coping.

	B (SE)
(Intercept)	3.27***(0.03)
Flexibility _{grand-mean centered}	0.002** (0.0007)
New cases per million _{grand-mean centered}	-0.001 (0.0008)
New cases per million _{society-mean centered}	-0.0008 (0.0009)
Flexibility _{grand-mean centered} × new cases per million _{grand-mean centered}	0.00007***(0.00002)
Flexibility _{grand-mean centered} × new cases per million _{society-mean centered}	-0.00003 (0.00002)
Gender _{grand-mean centered}	0.02 (0.27)
Gender _{society-mean centered}	0.003 (0.27)
Age _{grand-mean centered}	-0.004 (0.005)
Age _{society-mean centered}	-0.004 (0.005)
Education level _{grand-mean centered}	0.09*(0.04)
Education level _{society-mean centered}	-0.07 (0.04)
Stringency index _{grand-mean centered}	0.005 (0.004)
Stringency index _{society-mean centered}	-0.004 (0.004)
Hofstede's individualism _{grand-mean centered}	-0.002 (0.002)
Gini _{grand-mean centered}	0.01 (0.008)
GDP per capita _{grand-mean centered}	0.00001 (0.00001)
Pathogens per culture _{grand-mean centered}	-0.07*(0.03)
Population density _{grand-mean centered}	-0.0003 (0.0002)
People in household _{grand-mean centered}	-0.010 (0.005)
Conditional R ²	0.08
Observations	6760
Countries	26

Note: Unstandardized regression coefficients are displayed, with standard errors in parentheses.

p* < 0.05, *p* < 0.01, ****p* < 0.001.

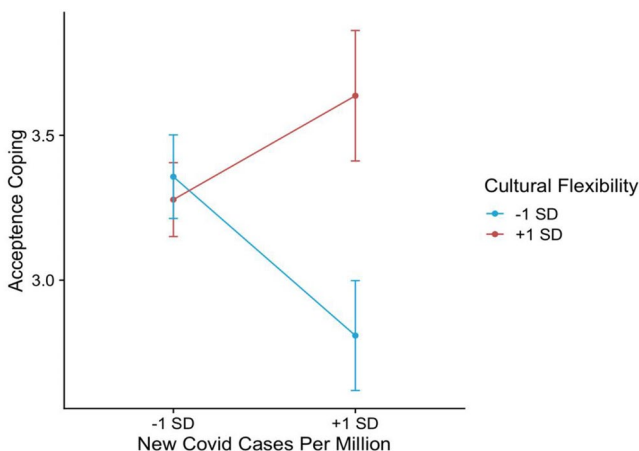


FIGURE 2 The interaction effect between cultural flexibility and new COVID-19 cases in model 3. Error bars represent 95% CI.

[Corrections added on 31 January 2024 after first online publication: The figures have been swapped]

Specifically, when cultural flexibility was higher (1SD above the mean), new cases per million was positively associated with participants' acceptance coping: $B = 0.005$, $SE = 0.002$, 95% CI = [0.001, 0.008], $p = 0.008$ (Table 2). When cultural flexibility was lower (1SD below the mean), new cases per million was negatively associated with participants' acceptance coping: $B = -0.007$, $SE = 0.002$, 95% CI = [-0.010, -0.004], $p < 0.001$. These results supported our hypothesis. We also adopted grand-mean centering and society-mean centering with or without covariates separately. The interaction effect between grand-mean centered cultural flexibility and new cases was robustly significant. These results were included in Table S4 in the supplementary materials.

6 | DISCUSSION

Our data from more than 7000 people in 26 countries confirmed that cultural flexibility moderated the relationship between COVID-19 cases and acceptance coping strategies. Specifically, for cultures with high flexibility, COVID-19 cases correlated with more acceptance coping; for cultures with low flexibility, COVID-19 cases correlated with less acceptance coping. This result is consistent with previous research that stated participants from more flexible cultures have the ability to adapt to suffering, while participants from less flexible cultures have trouble living with suffering (Minkov et al., 2018).

6.1 | Limitations

There are several limitations that need to be considered when interpreting the results from the current research. First, the number of countries is limited. To obtain validated results, we only included countries with at least 30 participants, some being university student samples, and there are limited cultures with flexibility scores (Minkov et al., 2018), resulting in only 26 cultures in the analysis. Future research could examine our findings in a larger sample with more cultures. Another significant limitation is our reliance on flexibility scores derived from a different study conducted in a pre-COVID context with another sample (i.e., Minkov et al., 2018). The generalization of flexibility scores from Minkov et al. (2018) to our sample poses a potential risk of bias. Future research should consider gathering firsthand data on cultural flexibility to ensure more precise and relevant interpretations. Finally, we only investigated acceptance coping strategy in the present study. Future research may profitably explore the link between cultural flexibility and other coping strategies.

6.2 | Implications

This study innovatively uses the newly discussed cultural trait flexibility-monumentalism to understand how individuals cope with the prevalence of this pandemic. As a cultural trait that distinguishes East Asian from the rest of the world, flexibility can help us understand more about why East Asian countries excelled in coping with COVID-19 (Li et al., 2022). Moreover, this study linked flexibility and acceptance coping for the very first time, enriching the research of both coping strategies and flexibility-monumentalism. In addition, the findings of this study could be instrumental for practitioners who wish to promote adaptive coping strategies. Interventions can be designed to increase flexibility, thereby enhancing adaptive responses to crises. For example, training sessions and workshops can focus on inculcating cultural flexibility. Through training, participants can be made aware of the benefits of flexibility and trained to imbibe this trait.

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CONFLICT OF INTEREST STATEMENT

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Alexander Scott English Ph.D. and Associate Professor in the School of Psychology at Wenzhou-Kean University. His primary research areas and interests center on cross-cultural adaptation of expats and international students. His research focuses on how people adapt to stressful situations in culturally appropriate ways. More recently, Dr. English has been fascinated with how culture shaped human behavior during the COVID-19 pandemic.

Steve J. Kulich (PhD Humboldt Univ. Berlin) at Shanghai Int'l Studies Univ. (SISU since 1993) is Founder/Director of the SISU Intercultural Inst. (SII, 2006), President of IAIR (2019–2021), researches values/identities, intercultural competencies (ICC), the history, status, and theory-base of Intercultural Studies, and exploring indigenous aspects of changing Chinese culture.

Lu Zheng is an associate professor in the School of Management at Huazhong University of Science and Technology. She received her PhD in IO psychology at Auburn University. Her research interests focus on newcomer socialization, cross-cultural adjustment and personnel selection.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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APPENDIX A: GLOBAL COVID PROJECT

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Tales	Alves	Portugal	tales.r.alves@gmail.com	University of Porto	Faculty of Psychology	Tales is a hypnotist and entrepreneur who works in the intersection field of Psychology and Artificial Intelligence. He helps companies grow by aligning AI with one-on-one human interactions, also exploring applications of AI on improving education system at scale.	https://orcid.org/0009-0005-9625-6354
Sibele D.	Aquino	Brazil	sibele.aquino@gmail.com	Pontifical Catholic University of Rio de Janeiro-PUCRio, Brazil	Department of Psychology	Sibele D. Aquino, Ph.D in Social Psychology, Postdoctoral Fellow and Researcher at the Social Psychology Research Laboratory of the Pontifical Catholic University of Rio de Janeiro and Associate Member of the Association for Research in Personality-ARP. Her research interests focus on psychosocial aspects of behavior, especially social cognition, personality, and positive variables.	https://orcid.org/0000-0003-1391-0911
Sanja	Batić Očovaj	Serbia	sanja.batic@gmail.com	Union University, Faculty of Law and Business Studies dr Lazar Vrkatić, Serbia	Department of Psychology	Sanja Batić Očovaj is Assistant Professor at Faculty of Law and Business Studies dr Lazar Vrkatić in Novi Sad, Serbia where she teaches Statistics and Psychometrics. She earned PhD in Social Psychology at University of Novi Sad in 2016. Her research is mostly related to the fields of social psychology, including migration.	https://orcid.org/0000-0001-6574-4797

APPENDIX A (Continued)

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Hacer	Belen	Turkey	hacerbelen@uludag.edu.tr	Bursa Uludag University	/	Hacer Belen, PhD., is an associate professor at Bursa Uludag University, Turkey, and earned her Ph.D. at the Department of Neuroscience, Psychology and Behaviour in the UK with a thesis on Hope Theory. Her main interests are positive psychological constructs, particularly hope.	https://orcid.org/0000-0001-9065-3504
Ashley	Biddle	US	ammorris@hawaii.edu	University of Hawaii- Leeward Community College	Social Sciences	Ashley Biddle earned her PhD in Developmental Psychology at University of Hawaii Manoa in 2017 and earned tenure at Leeward CC in 2023. Her research interests include children's social-cognitive development across cultures, using Open Pedagogy to support students' autonomy, and the experiences of parenting students in college.	http://orcid.org/0000-0003-3756-2755
Chinun	Boonrungsut	Thailand	b.chinun@gmail.com	Silpakorn University	Psychology and guidance	Chinun Boonrungsut is an lecturer in the Department of Psychology and Guidance, Faculty of Education. He earned his Ph.D. in Developmental and Educational Psychology at Central China Normal University. His research interests focus on developmental evaluation, education gaming and children skill imporvment.	http://orcid.org/0000-0001-8162-1295

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APPENDIX A (Continued)

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Adolfo Fabricio Licoa	Campos	China/ Ecuador	fabiolico@qq.com	Shanghai International Studies University	Literature Research Institute	Adolfo Fabricio Licoa Campos is a Ph.D candidate at the Literature Research Institute of Shanghai International Studies University. His work focuses on cross-cultural and interdisciplinary studies in Latin-American literature. Besides researching, he loves reading and translating poetry in the many libraries and bookstores scattered throughout the charming 'Paris of the East'.	http://orcid.org/0009-0004-3044-876X
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Cicilia	Chettiar	India	ciciliachettiar@yahoo.com	Maniben Nanavati Women's College	Department of Psychology	Cicilia Chettiar, Ph.D. is an Associate professor of Psychology at MNW College since 19 years. She heads the undergraduate department and the research centre at the institute. Her research interests include, culture, Indian Psychology, Spiritual Psychology and Somatic therapy.	http://orcid.org/0000-0002-6947-2757
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Natasza	Kosakowska-Berezecka	Poland	natasza.kosakowska-berezecka@ug.edu.pl	University of Gdansk	Division of Cross-Cultural and Gender Psychology	Natasza Kosakowska-Berezecka works as an Associate Professor and head in the Division of Cross-Cultural Psychology and Psychology of Gender at the University of Gdańsk (Poland). Her research focuses on gender norms and stereotypes in cross-cultural perspectives and her special interests are social change and cultural cues fostering gender equality within societies across the world.	https://orcid.org/0000-0003-3503-3921

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First name	Last name	Region of data collection	Email	University name	Department	Brief 50 word bio	Orcid
Benjamin H.	Nam	South Korea	w2004@shisu.edu.cn	Shanghai International Studies University	School of Education	Benjamin H. Nam is a Ph.D. and Associate Professor in the School of Education and the senior researcher in the Comparative Study of Global Education at Shanghai International Studies University. His primary research areas and interests center on comparative and international education, STEAM education, and intercultural communication.	https://orcid.org/0000-0001-9969-4783
Ginés	Navarro-Carrillo	Spain	ginesnc@ugr.es	University of Granada	Department of Social Psychology	Ginés Navarro-Carrillo has a Ph.D. in Psychology from the University of Granada (Spain).	https://orcid.org/0000-0003-0856-8197
Jose Candido Pereira	Neto	Brazil	jcandidopsi@gmail.com	Pontifical Catholic University of Rio de Janeiro	/	José Candido Pereira Neto, professor at Centro Universitário Serra dos Órgãos—UNIFESO, PhD in Social Psychology, researcher at the Social Psychology Research Laboratory at the Pontifical Catholic University of Rio de Janeiro. His research interests focus on the psychosocial aspects of behavior, especially issues of gender, personality, positive variables and Educational Psychology.	https://orcid.org/0000-0002-6575-4714
Felipe	Novaes	Brazil	felipecarvalho.n@gmail.com	Pontifical Catholic University of Rio de Janeiro	Department of Psychology	Felipe Novaes is Professor of Psychology at Pontifical Catholic University of Rio de Janeiro (PUC-Rio). His work focuses on Evolutionary Psychology, the relationship between ideology, culture and the psychological bases of scientific denialism.	

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APPENDIX A (Continued)

First name	Last name	Region of data collection	Email	University name	Department	Brief 50 word bio	Orcid
Eliza	Oliver	Norway	elizamaryoliver@gmail.com	University of Oslo	School of Psychology	Eliza Oliver is the Research Manager at the CREATE Centre at the University of Sydney, she is also a provisional psychologist and Master of Psychology (Clinical) candidate at the Australian Catholic University. Her research interests include clinical applications for the treatment and prevention of intimate partner violence as well as the role of the arts in mental health and wellbeing.	https://orcid.org/0000-0001-9546-4091
Daniele	Paolini	Italy	daniele.paolini@unipegaso.it	Pegaso University	Faculty of Human Sciences, Education and Sport	Daniele Paolini, PhD, is associate professor in Social Psychology at Pegaso University, active member of national and international scientific associations, guest editor for special issues and ad-hoc reviewer in international multidisciplinary journals, author and co-author of several international scientific publications on Ostracism, prejudice, sexual identity and intergroup processes.	https://orcid.org/0000-0002-9479-4360
Joonha	Park	Japan	joonha35@gmail.com	Nagoya University of Commerce and Business	School of Management	/	/

APPENDIX A (Continued)

First name	Last name	Region of data collection	Email	University name	Department	Brief 50 word bio	Orcid
Dušana	Šakan	Serbia	dusanasarcevic@gmail.com	Union University, Faculty of Law and Business Studies dr Lazar Vrkatic, Serbia	Department of Psychology	Dušana Šakan is Assistant Professor at Faculty of Law and Business Studies dr Lazar Vrkatic in Novi Sad, Serbia where she teaches Educational Psychology and Psychology of Motivation. She earned PhD in Educational Psychology at University of Novi Sad in 2018. Her research is mostly related to the fields of education, motivation, well-being and development. Her recent interests are related to crosscultural research.	https://orcid.org/0000-0003-1087-2550
Miriam	Schwarzenthal	Germany	schwarzenthal@uni-wuppertal.de	University of Wuppertal	School of Education	Miriam Schwarzenthal is a junior professor at the University of Wuppertal in Germany. Her research focuses on intercultural competence and critical consciousness among secondary school students and (preservice) teachers, as well as the school diversity climate.	https://orcid.org/0000-0002-6278-6227
Qian	Sun	China/UK	sunqian@zjnu.edu.cn	Zhejiang Normal University	School of Psychology	Qian Sun is a lecturer in psychology at Zhejiang Normal University. She obtained her Ph.D. in psychology from the University of Essex (UK) and was a postdoctoral fellow in psychology at New York University Shanghai. Her research focuses on migrant families' and international students' acculturation and adaptation.	https://orcid.org/0000-0002-1346-2904

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APPENDIX A (Continued)

First name	Last name	Region of data collection	Email	University name	Department	Brief 50 word bio	Orcid
Thomas	Talhelm	US	Thomas.Talhelm@ChicagoBooth.edu	University of Chicago	Booth School of Business	Thomas Talhelm is an Associate Professor of Behavioral Science at the University of Chicago Booth School of Business. His studies how rice farming gave southern China a more interdependent culture than wheat-farming northern China. He also researchers how people fundamentally misunderstand what collectivism is.	https://orcid.org/0000-0002-0954-5758
Robert	Thomson	Japan	rob.thomson@hokusei.ac.jp	Hokusei Gakuen University	/	Robert Thomson is associate professor of Media and Communications at Hokusei Gakuen University in Sapporo City, Japan. His research has a focus on cross-cultural differences in media behavior, particularly on the Internet.	https://orcid.org/0000-0001-7002-3257
Arun	Tipandjian	India	aruneps73@googlemail.com	International centre for psychological counseling and social research	/		https://orcid.org/0000-0002-8079-1871
Rongtian	Tong	US/China	georgetong@rocketmail.com	University of Washington	The Henry M. Jackson School of International Studies	Rongtian Tong is a recent MA in International Studies graduate from the University of Washington. He is currently working on several research projects related to acculturation. His past publications have appeared in The Handbook of Intercultural Training (4th ed.), International Journal of Intercultural Relations, and Current Research in Ecological and Social Psychology.	https://orcid.org/0000-0003-2611-069X

APPENDIX A (Continued)

First name	Last name	Region of data collection	Email	University name	Department	Brief 50 word bio	Orcid
Jorge	Torres-Marin	Spain	jtorresmarin@ugr.es	University of Granada	Department of Research Methods in Behavioral Sciences	Jorge Torres-Marin has a PhD in Psychology from the University of Granada (Spain). His research interests focus on humor and laughter, dark personality traits, test construction/adaptation, and data analysis.	https://orcid.org/0000-0001-7663-0699
Shuang	Wang	Hong Kong, China	shuangwang.zoe@gmail.com	The Education University of Hong Kong	Department of Psychology	Shuang Wang is a PhD student at the Education University of Hong Kong. Her current research interest focuses on how cultural factors, norms, and morality can affect the individual's judgement and behavior	/
Liuqing	Wei	US	weliuqing1985@126.com	Hubei University	Department of Psychology	Liuqing Wei is an assistant professor at Department of Psychology, Hubei University, China. Her research interests focus on cross-cultural psychology, such as norm tightness and people's health protective behaviors, relational mobility and subjective well-being, and mapping collectivism in China.	https://orcid.org/0000-0001-6488-7454

Victoria Wai Lan	Yeung	Hong Kong, China	vickiyeung@ln.edu.hk	Lingnan University	Department of Psychology	Victoria Yeung is a Full Professor at the Department of Psychology and the Associate Dean (Research and Postgraduate Studies) at the Faculty of Social Sciences, Lingnan University.	https://orcid.org/0000-0002-3479-3198
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APPENDIX A (Continued)

First name	Last name	Region of data collection	Email	University name	Department	Brief 50 word bio	Orcid
Mahdi	Yousefi	China	yousefi.mahdi@gmail.com	Hainan Normal University	School of Literature	Mahdi Yousefi is a research associate at the School of Literature, Hainan Normal University, working on a national-level project on branding of Hainan Free Trade Port. He got his PhD in intercultural communication from Shanghai International Studies University. His research areas include international and intercultural communication and China-Middle East relations.	/
Ananta	Yudiarso	Indonesia	ananta@staff.ubaya.ac.id	Surabaya University	Faculty of Psychology	Ananta Yudiarso is a researcher and lecturer at Faculty of Psychology Surabaya University Surabaya Indonesia	/
Masaki	Yuki	Japan	myuki@let.hokudai.ac.jp	Hokkaido University	Department of Behavioral Science/Center for Experimental Research in Social Sciences	Masaki Yuki is a professor of social and cultural psychology at Hokkaido University, Japan. He mainly focuses on how the characteristics of the social environment, particularly relational mobility, affect the psychological and behavioral patterns of people who reside there.	https://orcid.org/0000-0002-4589-5616
Xinyi	Zhang	China	xinyizhang513@gmail.com	Shanghai International Studies University	Intercultural Institute	Zhang Xin Yi is a PhD student in the SISU Intercultural Institute (SI) at Shanghai International Studies University. Her primary research areas and interests focus on cross-cultural adaptation and identity negotiation of expats, international students, and overseas returnees.	/

[Corrections added on 31 January 2024 after first online publication: The authors Hacer Belen's affiliation has been updated and Adolfo Fabricio Licoa Campos ORCID has been included]