

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

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**Funding information**

This project was partially supported with funding from the Susan and Richard Kiphart Center for Global Health and Social Development at the University of Chicago's Crown Family School of Social Work, Policy, and Practice, the Fundamental Research Funds for the Central Universities, and the National Natural Science Foundation of China, Grant/Award Number: 71901100

**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 <sub>grand-mean centered</sub>	0.002** (0.0007)
New cases per million <sub>grand-mean centered</sub>	-0.001 (0.0008)
New cases per million <sub>society-mean centered</sub>	-0.0008 (0.0009)
Flexibility <sub>grand-mean centered</sub> × new cases per million <sub>grand-mean centered</sub>	0.00007***(0.00002)
Flexibility <sub>grand-mean centered</sub> × new cases per million <sub>society-mean centered</sub>	-0.00003 (0.00002)
Gender <sub>grand-mean centered</sub>	0.02 (0.27)
Gender <sub>society-mean centered</sub>	0.003 (0.27)
Age <sub>grand-mean centered</sub>	-0.004 (0.005)
Age <sub>society-mean centered</sub>	-0.004 (0.005)
Education level <sub>grand-mean centered</sub>	0.09*(0.04)
Education level <sub>society-mean centered</sub>	-0.07 (0.04)
Stringency index <sub>grand-mean centered</sub>	0.005 (0.004)
Stringency index <sub>society-mean centered</sub>	-0.004 (0.004)
Hofstede's individualism <sub>grand-mean centered</sub>	-0.002 (0.002)
Gini <sub>grand-mean centered</sub>	0.01 (0.008)
GDP per capita <sub>grand-mean centered</sub>	0.00001 (0.00001)
Pathogens per culture <sub>grand-mean centered</sub>	-0.07*(0.03)
Population density <sub>grand-mean centered</sub>	-0.0003 (0.0002)
People in household <sub>grand-mean centered</sub>	-0.010 (0.005)
Conditional R <sup>2</sup>	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.

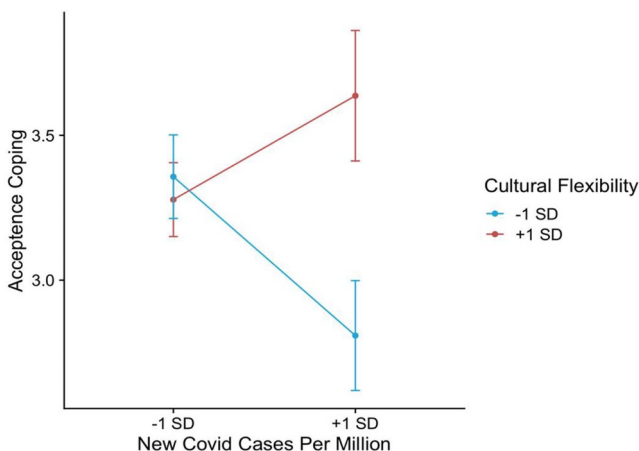


FIGURE 2 The interaction effect between cultural flexibility and new COVID-19 cases in model 3. Error bars represent 95% CI.

[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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## ACKNOWLEDGMENTS

Our appreciation also goes to the editors and reviewers whose insightful comments and feedback have been instrumental in enhancing the quality of our paper significantly. We are also grateful for all of the individuals around the world who agreed to participate in this study at the start of the outbreak in 2020. A special thanks goes out to the worldwide research collaborators who assisted us in collecting data. We also extend our gratitude to the foundations for their support of our research. This project was partially supported with funding from the Susan and Richard Kiphart Center for Global Health and Social Development at the University of Chicago's Crown Family School of Social Work, Policy, and Practice, the Fundamental Research Funds for the Central Universities, and the National Natural Science Foundation of China (grant number 71901100). Dmitrii Dubrov received funding for data collection from HSE University Basic Research Program.

[Corrections added on 31 January 2024 after first online publication: The acknowledgment section has been revised]

## 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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**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.

**How to cite this article:** Zhou, X., English, A. S., Kulich, S. J., Zheng, L., Alves, T., Aquino, S. D., Batić Očovaj, S., Belen, H., Biddle, A., Boonroungrut, C., Campos, A. F. L., Castro, R., Chettiar, C., Chobthamkit, P., Cowden, R. G., Dubrov, D., F. Falavarjani, M., Farid, T., Geeraert, N., ... Zhang, X. (2024). COVID-19 cases correlate with greater acceptance coping in flexible cultures: A cross-cultural study in 26 countries. *Social and Personality Psychology Compass*, e12919. <https://doi.org/10.1111/spc3.12919>

## APPENDIX A: GLOBAL COVID PROJECT

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Ashley	Biddle	US	<a href="mailto:ammorris@hawaii.edu">ammorris@hawaii.edu</a>	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.	<a href="http://orcid.org/0000-0003-3756-2755">http://orcid.org/0000-0003-3756-2755</a>
Chinun	Boonrungsut	Thailand	<a href="mailto:b.chinun@gmail.com">b.chinun@gmail.com</a>	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.	<a href="http://orcid.org/0000-0001-8162-1295">http://orcid.org/0000-0001-8162-1295</a>

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Dmitry	Grigoryev	Russia	<a href="mailto:dgrigoryev@hse.ru">dgrigoryev@hse.ru</a>	HSE University	Center for Sociocultural Research	Prof. Dmitry Grigoryev is a staff at HSE University, specializing in the fields of intergroup relations, cultural diversity, and acculturation. His research aims to understand the psychological mechanisms that govern social interactions across diverse groups, informing policy.	<a href="https://orcid.org/0000-0003-4511-7942">https://orcid.org/0000-0003-4511-7942</a>
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Kaiyue	Huang	China	<a href="mailto:huangkaiyue_zwx@126.com">huangkaiyue_zwx@126.com</a>	Yulin Normal University	Department of Literature and Media	Huang Kaiyue is a lecturer at Yulin Normal University in Guangxi, China. She specializes in the fields of filmmaking, visual culture, and new media.	
Huang	Jiang	China/USA	<a href="mailto:parisejiang@gmail.com">parisejiang@gmail.com</a>	Shanghai Foreign Language Education Press	Institute for Language Materials Development	Dr. Huang Jiang is an editor at Shanghai Foreign Language Education Press, and a researcher at the Institute for Language Materials Development, Shanghai International Studies University. Dr. Jiang does research primarily related to international students' intercultural adaptation and identity processes. She's also experienced in foreign language education and intercultural trainings.	<a href="https://orcid.org/0009-0002-3433-3746">https://orcid.org/0009-0002-3433-3746</a>

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Monika	Klimek-Tulwin	Poland	<a href="mailto:monika.klimekk@gmail.com">monika.klimekk@gmail.com</a>	Medical University of Lublin	Department of Laboratory Diagnostics	Monika Klimek-Tulwin, MD, PhD, earned her PHD at the Department of Laboratory Diagnostics with a thesis on diabetes and obesity research. She is a medical doctor working in the hospital and clinics. Her main interests are metabolic diseases and diseases of civilization.	<a href="http://orcid.org/0000-0002-3849-4654">http://orcid.org/0000-0002-3849-4654</a>
Natasza	Kosakowska-Berezecka	Poland	<a href="mailto:natasza.kosakowska-berezecka@ug.edu.pl">natasza.kosakowska-berezecka@ug.edu.pl</a>	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.	<a href="https://orcid.org/0000-0003-3503-3921">https://orcid.org/0000-0003-3503-3921</a>

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Jonas R.	Kunst	Norway	<a href="mailto:j.r.kunst@psykologi.uio.no">j.r.kunst@psykologi.uio.no</a>	University of Oslo	/	Dr. Jonas R. Kunst is a professor of cultural and community psychology at the University of Oslo, where he directs the Culture, Society, & Behavior Lab.	
Katharina	Lefringhausen	UK	<a href="mailto:K.lefringhausen@hw.ac.uk">K.lefringhausen@hw.ac.uk</a>	Heriot-Watt University	Department of Psychology	Dr Katharina Lefringhausen is an Assistant Professor at the Heriot-Watt University in Edinburgh. Her research focuses on intergroup relationships and multiculturalism. Specifically, she looks into majority members' acculturation to ethnic minority members' cultures in a shared society, its antecedents and implications for both groups.	<a href="https://orcid.org/0000-0002-2998-1311">https://orcid.org/0000-0002-2998-1311</a>
Xiaoyuan	Li	China	<a href="mailto:xiaoyuanli@cityu.mo">xiaoyuanli@cityu.mo</a>	City University of Macao	Faculty of Humanities and Social Sciences	Xiaoyuan Li is Assistant Professor at the Faculty of Humanities and Social Sciences at City University of Macao. She gained her PhD in Intercultural Communication from Shanghai International Studies University. Her research interests include international education, culture of migration, and intercultural development.	<a href="https://orcid.org/0000-0003-1892-3594">https://orcid.org/0000-0003-1892-3594</a>
Samuel	Lins	Portugal	<a href="mailto:samuellins@fpce.up.pt">samuellins@fpce.up.pt</a>	University of Porto	Department of Psychology	Samuel Lins is professor of Social Psychology and researcher of the Laboratory of Social Psychology from the Center for Psychology at the University of Porto (CPUP). He graduated in Psychology and Management, and his research interests mainly include psychosociological aspects of consumer behavior.	<a href="https://orcid.org/0000-0001-6824-4691">https://orcid.org/0000-0001-6824-4691</a>

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## APPENDIX A (Continued)

First name	Last name	Region of data collection	Email	University name	Department	Brief 50 word bio	Orcid
Sadia	Malik	Pakistan	<a href="mailto:drsadiamalik13@gmail.com">drsadiamalik13@gmail.com</a>	University of Sargodha	Department of Psychology	Dr. Sadia Malik is an associate professor in Psychology at University of Sargodha, Pakistan. Her research interests focus on psychopathology, violence and behavioral addiction.	<a href="https://orcid.org/0000-0002-5110-5924">https://orcid.org/0000-0002-5110-5924</a>
Fridanna	Maricchiolo	Italy	<a href="mailto:fridanna.maricchiolo@uniroma3.it">fridanna.maricchiolo@uniroma3.it</a>	University of Roma Tre	Department of Education	Fridanna Maricchiolo, PhD, is associate professor in Social Psychology at University Roma Tre, 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 health, well-being, happiness, environmental and community psychology	<a href="https://orcid.org/0000-0002-6230-6609">https://orcid.org/0000-0002-6230-6609</a>
Laura	Martinez-Buelvas	Colombia	<a href="mailto:lmartinez@utb.edu.co">lmartinez@utb.edu.co</a>	Universidad Tecnológica de Bolívar	Department of Industrial Engineering	Laura is an Industrial Engineer and MPhil in Industrial Engineering from Universidad del Norte (Colombia). Currently, she is a full-time lecturer in engineering management at the Universidad Tecnológica de Bolívar (Colombia). She has served as the chair of the Industrial Engineering Program at the same University (2017–2018). Her research interests are human factors engineering, work design, safety engineering and justice.	<a href="https://orcid.org/0000-0002-8349-1137">https://orcid.org/0000-0002-8349-1137</a>
Elma	Medosevic-Korjentic	Bosnia	<a href="mailto:elma.medosevic@gmail.com">elma.medosevic@gmail.com</a>	University of Sarajevo	Department of Psychology, University of Sarajevo	MA student of Psychology in University of Sarajevo. Research interest focused on Social and Forensic Psychology.	/

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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.	<a href="https://orcid.org/0000-0001-9969-4783">https://orcid.org/0000-0001-9969-4783</a>
Ginés	Navarro-Carrillo	Spain	<a href="mailto:ginesnc@ugr.es">ginesnc@ugr.es</a>	University of Granada	Department of Social Psychology	Ginés Navarro-Carrillo has a Ph.D. in Psychology from the University of Granada (Spain).	<a href="https://orcid.org/0000-0003-0856-8197">https://orcid.org/0000-0003-0856-8197</a>
Jose Candido Pereira	Neto	Brazil	<a href="mailto:jcandidopsi@gmail.com">jcandidopsi@gmail.com</a>	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.	<a href="https://orcid.org/0000-0002-6575-4714">https://orcid.org/0000-0002-6575-4714</a>
Felipe	Novaes	Brazil	<a href="mailto:felipecarvalho.n@gmail.com">felipecarvalho.n@gmail.com</a>	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	<a href="mailto:elizamaryoliver@gmail.com">elizamaryoliver@gmail.com</a>	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.	<a href="https://orcid.org/0000-0001-9546-4091">https://orcid.org/0000-0001-9546-4091</a>
Daniele	Paolini	Italy	<a href="mailto:daniele.paolini@unipegaso.it">daniele.paolini@unipegaso.it</a>	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.	<a href="https://orcid.org/0000-0002-9479-4360">https://orcid.org/0000-0002-9479-4360</a>
Joonha	Park	Japan	<a href="mailto:joonha35@gmail.com">joonha35@gmail.com</a>	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	<a href="mailto:dusanasarcevic@gmail.com">dusanasarcevic@gmail.com</a>	Union University, Faculty of Law and Business Studies dr Lazar Vrkatić, Serbia	Department of Psychology	Dušana Šakan is Assistant Professor at Faculty of Law and Business Studies dr Lazar Vrkatić 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.	<a href="https://orcid.org/0000-0003-1087-2550">https://orcid.org/0000-0003-1087-2550</a>
Miriam	Schwarzenthal	Germany	<a href="mailto:schwarzenthal@uni-wuppertal.de">schwarzenthal@uni-wuppertal.de</a>	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.	<a href="https://orcid.org/0000-0002-6278-6227">https://orcid.org/0000-0002-6278-6227</a>
Qian	Sun	China/UK	<a href="mailto:sunqian@zjnu.edu.cn">sunqian@zjnu.edu.cn</a>	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.	<a href="https://orcid.org/0000-0002-1346-2904">https://orcid.org/0000-0002-1346-2904</a>

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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	<a href="mailto:Thomas.Talhelm@ChicagoBooth.edu">Thomas.Talhelm@ChicagoBooth.edu</a>	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.	<a href="https://orcid.org/0000-0002-0954-5758">https://orcid.org/0000-0002-0954-5758</a>
Robert	Thomson	Japan	<a href="mailto:rob.thomson@hokusei.ac.jp">rob.thomson@hokusei.ac.jp</a>	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.	<a href="https://orcid.org/0000-0001-7002-3257">https://orcid.org/0000-0001-7002-3257</a>
Arun	Tipandjian	India	<a href="mailto:aruneps73@googlemail.com">aruneps73@googlemail.com</a>	International centre for psychological counseling and social research	/		<a href="https://orcid.org/0000-0002-8079-1871">https://orcid.org/0000-0002-8079-1871</a>
Rongtian	Tong	US/China	<a href="mailto:georgetong@rocketmail.com">georgetong@rocketmail.com</a>	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.	<a href="https://orcid.org/0000-0003-2611-069X">https://orcid.org/0000-0003-2611-069X</a>

## APPENDIX A (Continued)

First name	Last name	Region of data collection	Email	University name	Department	Brief 50 word bio	Orcid
Jorge	Torres-Marin	Spain	<a href="mailto:jtorresmarin@ugr.es">jtorresmarin@ugr.es</a>	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.	<a href="https://orcid.org/0000-0001-7663-0699">https://orcid.org/0000-0001-7663-0699</a>
Shuang	Wang	Hong Kong, China	<a href="mailto:shuangwang.zoe@gmail.com">shuangwang.zoe@gmail.com</a>	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	<a href="mailto:weiliuqing1985@126.com">weiliuqing1985@126.com</a>	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.	<a href="https://orcid.org/0000-0001-6488-7454">https://orcid.org/0000-0001-6488-7454</a>

Victoria Wai Lan	Yeung	Hong Kong, China	<a href="mailto:vickiyeung@ln.edu.hk">vickiyeung@ln.edu.hk</a>	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.	<a href="https://orcid.org/0000-0002-3479-3198">https://orcid.org/0000-0002-3479-3198</a>
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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	<a href="mailto:yousefi.mahdi@gmail.com">yousefi.mahdi@gmail.com</a>	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	<a href="mailto:ananta@staff.ubaya.ac.id">ananta@staff.ubaya.ac.id</a>	Surabaya University	Faculty of Psychology	Ananta Yudiarso is a researcher and lecturer at Faculty of Psychology Surabaya University Surabaya Indonesia	/
Masaki	Yuki	Japan	<a href="mailto:myuki@let.hokudai.ac.jp">myuki@let.hokudai.ac.jp</a>	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.	<a href="https://orcid.org/0000-0002-4589-5616">https://orcid.org/0000-0002-4589-5616</a>
Xinyi	Zhang	China	<a href="mailto:xinyizhang513@gmail.com">xinyizhang513@gmail.com</a>	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]