

# Social capital in Mexico moderates the relationship of uncertainty and cooperation during the SARS-COV-2 pandemic

Christian E. Cruz-Torres<sup>1</sup>  | Jaime Martín del Campo-Ríos<sup>2</sup> 

<sup>1</sup>Departamento de Psicología, Universidad de Guanajuato, Campus León, Blvd. Puente Milenio, León, Guanajuato, Mexico

<sup>2</sup>División Multidisciplinaria de Ciudad Universitaria, Instituto de Ciencias Sociales y Administración, Universidad Autónoma de Ciudad Juárez, Ciudad Juárez, Chihuahua, Mexico

## Correspondence

Christian Enrique Cruz-Torres, Blvd. Puente Milenio No. 1001 Fracción del Predio San Carlos C.P. 37670, Mexico.  
Email: christian.cruz@ugto.mx

## Abstract

This study proposes that, given the coronavirus disease 2019 pandemic, its sanitary restrictions, and the associated economic effects, citizens perceive higher uncertainty and tend to reduce their willingness to cooperate with others. Community social capital refers to a set of norms of reciprocity, trust, and civic engagement networks that promote trust, reciprocal help, and cooperation for mutual benefits. It is also suggested that it can help alleviate negative effects of the pandemic in communities, by reducing uncertainty and its harmful effects on cooperation. These hypotheses were tested in a sample of 565 inhabitants of Mexico, who answered an online survey with measurements of social capital, uncertainty, and willingness to cooperate in the face of the pandemic. The relationships between variables were analyzed in two structural equation models, which show adequate goodness of fit, where higher levels of uncertainty generated by the pandemic were associated with a greater disposition to non-cooperation with others, while social capital moderated this relation decreasing negative effects of uncertainty on noncooperation. The value of social capital is discussed as a resource worth preserving and promoting in communities to strengthen them, so that they are better able to face health or economic contingencies.

## KEYWORDS

cooperation, social capital, uncertainty

## 1 | INTRODUCTION

### 1.1 | Impact and uncertainty of COVID-19

The world is currently experiencing a pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (World Health Organization, 2021) that has rapidly become a disease with unpredictable impacts for health systems and society due to its etiology, spread, and management (Koffman et al., 2020). Among its possible effects, it is estimated that the present pandemic could increase levels of poverty and nutritional insecurity, because of the absence or weakness of political, economic, and social interventions to secure jobs and sustain a healthy food supply chain, especially in the countries with the lowest incomes (Pereira & Oliveira, 2020). It is also estimated that the mobility and operation restrictions of companies to reduce contagion generated a loss of 255 million full-time jobs in 2020, in addition to high uncertainty about its recovery by 2021 (International Labor Organization, 2021), threatening the stability and sustenance of the citizenship. In addition, journalistic notes about communities that prevent access to visitors (Rojas, 2020) show attacks on health personnel or health centers—on the grounds that they imply a risk of contagion (Montoya, 2020). All of these factors, as well as reports of a rise on xenophobic and racist behavior (Mamun & Griffiths, 2020), may indicate a trend towards tribalization and a willingness in individuals to respond to the uncertainty derived from coronavirus disease 2019 (COVID-19) by locking themselves in their closest social nuclei, denying cooperation and even becoming hostile towards others, thus threatening the social fabric.

Conditions that expose us psychologically to the idea of dying are studied under Terror Management Theory (TMT). They occur both at a personal level and in large-scale events that involve collective experiences such as man-made and natural disasters or contagions such as the current pandemic crisis (Pyszczynski et al., 2020). In general, TMT assumes that the awareness of disasters or threatening large-scale events increase death anxiety (Fritsche & Hoppe, 2019). In the case of natural disasters, TMT has provided empirical evidence of attitude changes, for instance, effects on people's attitudes towards their own body via a disgust towards body products (Goldenberg et al., 2001) or less positive attitudes toward breastfeeding (Cox et al., 2007). This distance from the corporeal and human's animal nature is considered as an adaptive tendency to control existential anxiety (Fritsche & Hoppe, 2019).

Apart from natural disasters or large-scale events, on a personal level, TMT has also shown that when individuals are stimulated to evoke beliefs associated with their own death, psychological changes occur affecting their social relationships. For example, Strachman and Schimel (2006) showed that activating thoughts about one's own mortality generates an effect of less commitment towards the romantic partner, but only when both individuals endorse very different beliefs. It was argued that the salience of the idea of one's own death motivates the need to defend a general vision about how the world works in accordance with our own beliefs. This behavior is theorized as a psychological strategy to regain the tranquility lost when facing the idea of one's own death. Using a similar methodology, Renkema et al. (2008) showed that people under this condition were more susceptible to changing their own ideas to adhere to those ideas held in their own group but rejected ideas coming from another group. Furthermore, they tended to perceive people from other groups based on stereotypes and not as individuals, which is a potential generator of intergroup conflicts. To further complicate this violence-enhancing scenario, the study by Routledge and Arndt (2008) has shown that individuals induced with the idea of their own death are more willing to sacrifice their own physical integrity to defend their own group, which gives meaning to their sacrifice of transcendence.

In this same line of studies, Van den Bos et al. (2005) showed evidence of similar, or even greater effects, of defense of their own beliefs and rejection of others' after evoking a feeling of uncertainty in the participants. Parting from this theoretical approach, Maas and van den Bos (2011, p.109) define personal uncertainty as "the subjective sense of doubt or instability in people's self-views, world-views, or the interrelation between the two." Additionally, Brizi et al. (2016) found that people with a dispositional need to find a quick response to situations of uncertainty, known as the need for closure, tended to discriminate more frequently against people from other groups. However, when the conditions of uncertainty increased in people without this trait, the same increase was observed in the tendency to discriminate against others. It is important to pinpoint that uncertainty (as well as lack of control) has been proposed to be intimately related to existential threat elicited by the awareness of inevitable personal death (Fritsche & Hoppe, 2019). Moreover, Echebarria-Echabe (2013) has also experimentally analyzed this debate between the effects of mortality salience and uncertainty, finding that, although they are not exactly the same, both conditions generate high levels of anxiety and rejection towards those who present a different vision or belong to another group. Furthermore, we argue that, regardless of whether one consciously believes that the virus is a major threat to life or not, there is a strong feeling of uncertainty, considering the diverse crises linked to the pandemic. Most importantly, aside from this debate between thinking about one's own death or perceived uncertainty, the health phenomenon to which this project is dedicated may well generate both conditions, affecting the relations of cooperation and competition between social groups in a similar manner.

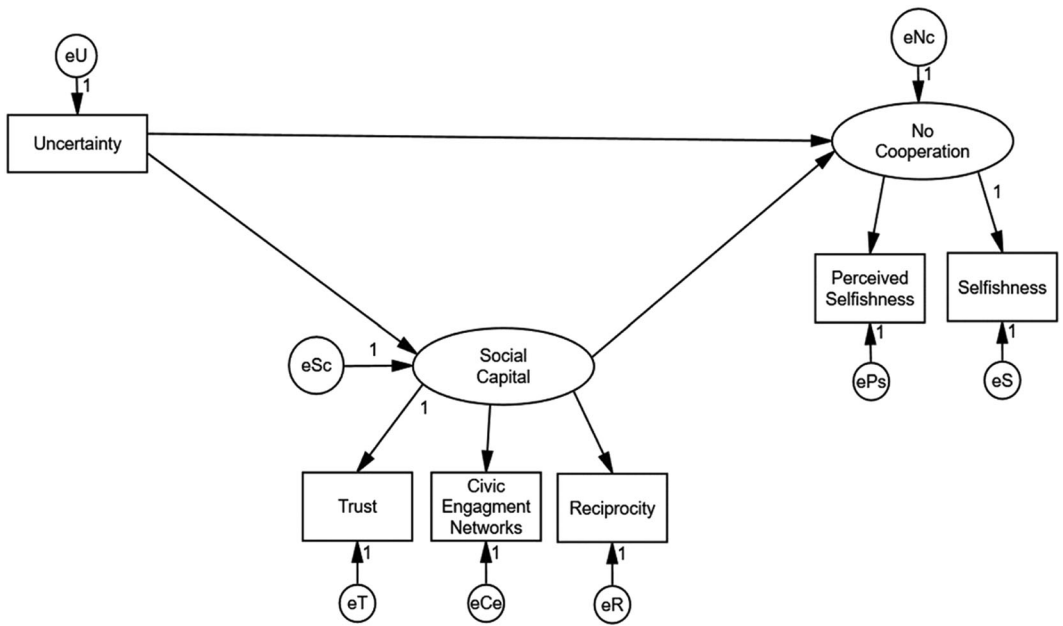
## 1.2 | Social welfare and social capital

The tendency to shelter ourselves within closest circles and reject those we perceive as different could also break social ties that are more distant although fundamental to community welfare and peace. This social fabric is composed of stable links of reciprocal cooperation that generate benefits for those who participate since they allow maximizing their own resources, thus achieving common goals that would not have been obtained individually or by reducing their costs through the participation of other individuals or groups. A community in which most of the neighbors trust and support each other, exchange favors on a regular basis, and are committed to the community well-being, generates conditions of security and harmony that create a better place to live for all, considered therefore as a common good (Ostrom, 2011). Then, this welfare extends to those who do not fully participate in the network of relationships.

These community conditions have been studied under the concept of *social capital*, which Putnam (1993) defines as the concordance of the three components: social trust, norms of reciprocity, and networks of civic engagement with the purpose to coordinate collective actions. From this perspective, trust is understood as the assessment of another individual possessing the necessary qualities to comply with the socially established norms in the community (honesty, reciprocity, etc.); the norms of reciprocity refer to the rules embedded in the community culture that dictate keeping in mind and reciprocating the previously received support/trust; lastly, civic engagement networks are built links with the purpose of obtaining benefits for the entire community. Thus, these three components of social capital have been linked to better development of communities and their inhabitants (Putnam, 2000); they have been also identified as key components in the restoration of social order and economic growth in communities victimized by war (Colleta & Cullen, 2000).

## 1.3 | Objective and hypothesis

Given the conditions of uncertainty and danger of death associated with the current health contingency and considering the theoretical background that points towards isolation and lack of cooperation in broader social networks, this study project seeks to answer the following question: Can community social capital reduce the



**FIGURE 1** Model of uncertainty effects on the willingness of non-cooperating with others during the pandemic moderated by social capital

negative effects of the uncertainty associated with the pandemic and health restrictions on social cooperation? In this regard, it is proposed, as a hypothesis, that the uncertainty derived from the health contingency increases the lack of social cooperation, and that these effects decrease due to community social capital. Thus, the role of community social capital as a moderating variable of the relationship between uncertainty and lack of cooperation is proposed. Both hypotheses are represented in Figure 1.

## 2 | METHODS

### 2.1 | Participants

The survey was conducted during the second to the fourth week of April 2020, 1 month after COVID-19 was declared a pandemic by the World Health Organization on March 11, 2020 (coronavirus confirmed as pandemic by World Health Organization, 2020), 3 weeks after nonessential face-to-face activities were partially or completely abolished in Mexico on March 26, 2020 (Palma et al., 2020), and 1 week after a national health emergency was declared in Mexico on March 31, 2020 (Borunda, 2020).

There were responses from 554 participants (63.3% females), aged between 17 and 68 years ( $M = 24.08$  years,  $SD = 7.62$ ), residents of 21 states of the Mexican Republic, mainly Chihuahua (74.5%) and Guanajuato (12.7%); 42% declared that they had unfinished degrees, 26.8% completed upper secondary level studies and 19% completed undergraduate studies; 2.7% reported working in a hospital and 27.3% declared that they had relatives who worked in a hospital; 74% stated that they did not have any children. None of the participants declared to have been diagnosed with COVID-19 and 89.6% confirmed that they did not to have had related symptoms; 2.7% affirmed that one of their relatives was diagnosed with COVID-19 and 84.4% declared that no one in their family had had symptoms.

## 2.2 | Instruments

### 2.2.1 | 10-item—Community Evaluation of Social Capital (original title in Spanish: Evaluación Comunitaria del Capital Social; Cruz & Contreras-Ibáñez, 2015)

Responses are scored on a 4-point Likert scale (1 = *Totally Disagree* to 4 = *Totally Agree*). Internal reliability estimates for this scale are of  $\alpha > 0.80$  for three factors (Cruz & Contreras-Ibáñez, 2015). The first factor groups the items that refer to the presence of social capital insofar as they refer to norms of reciprocity (e.g., “Neighbors usually support each other when someone needs it”), civic engagement networks (e.g., “In my neighborhood or neighborhood the neighbors are willing to contribute money or work to improve public services”), and trust (e.g., “We neighbors try to take care of each other”). The second-factor groups the items that denote the absence of social capital and therefore of norms of reciprocity (e.g., “My neighbors do not respect the work done for the good of the community”), mistrust (e.g., “In my community the one who loves looks bad organize to ask for services or supports”), and civic engagement networks (e.g., “Even if they can, my neighbors do not contribute anything to the neighborhood”). The *Community Evaluation of Social Capital* showed the theoretically expected solution of three factors which altogether explain 39.27% of the variance. The first factor was named *reciprocity*; it refers to the willingness of support and the expectation of receiving support in response (e.g., “if a neighbor asks me for a favor, I know that I will have their support when I need it”). The second factor refers to the ability and willingness of neighbors to organize and solve community problems (e.g., “if a problem arose on our streets, neighbors would organize quickly”), it was named *civic engagement networks*. The third factor refers to negative beliefs that denote distrust of neighbors (e.g., “if I neglect myself, my neighbors would take the opportunity to do something bad to me”); to facilitate their interpretation, the scores of these items were recorded in reverse, hence, the factor was named *confidence*. The confirmatory factor analysis shows indices of adequate goodness of fit (oot Mean Square Residual [RMR] = 0.03; Goodness of Fit Index [GFI] = 0.95; adjusted for degrees of freedom [AGFI] = 0.91; comparative fit index [CFI] = 0.96; Root Mean Square Error of Approximation [RMSEA] = 0.07, confidence interval [CI 90%] [0.04–0.09], PCLOSE = 0.08), except for the  $\chi^2$  indicator ( $\chi^2 = 55.24$ ,  $df = 24$ ,  $p < 0.001$ ) (Kline, 2016).

### 2.2.2 | 6-item—Measurement of non-cooperation

Items constructed for this study which measure the disposition to noncooperation with others during the present pandemic, focusing only on the closer social circles (e.g., “In these moments of contingency the best thing is to see for your family, not for others”), and the perception that others are also not disposed to cooperate (e.g., “With contingencies people try to see only for their own benefit”). Responses are scored on a 4-point Likert scale (1 = *Totally Disagree* to 4 = *Totally Agree*). The noncooperation exploratory factor analysis identified two factors that explain 49.32% of the total variance. The first factor refers to the perception that, during the contingency, people focus only on their own interests (e.g., “With the contingency, people try to see only for their own benefit”), which is why it was named *perceived selfishness*. The second factor refers to the willingness to look first for one's own interests and those closest to them and not for the interests of others (e.g., “Although I can support other people, now with the contingency I will only focus on my closest people”), therefore, it was named *selfishness*. The confirmatory factor analysis shows indices of adequate goodness of fit (RMR = 0.03; GFI = 0.97; AGFI = 0.93; CFI = 0.95; RMSEA = 0.07, CI 90% [0.03–0.11], PCLOSE = 0.13), except for the  $\chi^2$  indicator ( $\chi^2 = 19.98$ ,  $df = 8$ ,  $p = 0.01$ ) (Kline, 2016).

### 2.2.3 | 5-item—Measurement of uncertainty resulting from the coronavirus contingency

Instrument adapted from Lambert et al. (2014) that assesses the perception of uncertainty in the face of changes derived from the health contingency. Responses are scored on a 4-point Likert scale (1 = *Totally Disagree* to

4 = *Totally Agree*). It consists of a single factor named *uncertainty* (e.g., “At this moment I am uncertain about my ability to deal successfully with this contingency”). The uncertainty measurement integrated all its items into a single factor named *uncertainty* (e.g., “I’m not sure that I will be able to solve the problems that the coronavirus will bring to my life”) which explains 39.58% of the variance. The confirmatory factor analysis shows indices of adequate goodness of fit ( $\chi^2 = 4.18$ ,  $df = 4$ ,  $p = 0.38$ ; RMR = 0.01; GFI = 0.99; AGFI = 0.97; CFI = 0.99; RMSEA = 0.01, CI 90% [ $<0.001$  to 0.09], PCLOSE = 0.66) (Kline, 2016).

## 2.3 | Procedure

The [BLINDED] University granted full ethical approval to carry out the study within its facilities and with its students (Ethical Application Ref: CEI-2020-2-43). Students were invited to participate in a study via an email containing a website link to the study. Main measures were administered via the online SurveyMonkey tool (SurveyMonkey; <http://www.surveymonkey.com>).

Subsequently, support was requested from the students to contact, among their relatives, people with children and dedicated full-time to paid work or work at home to invite them to participate in the study, explaining the details of the informed consent and the procedures for filling out the measures. In order not to expose the health of the students during the quarantine period, they were reminded that these invitations had to be made electronically, without leaving their homes. With these characteristics, the sampling is considered nonprobabilistic and for convenience. Written consent was obtained for all participants. They were informed and reassured that their responses would remain confidential.

## 2.4 | Analysis

Even though it is not part of the central objectives of the research, the instruments designed specifically for this study were analyzed to obtain evidence of their validity and reliability. The construct validity of each instrument was verified by exploratory factor analysis using the maximum likelihood extraction method using SPSS 22 (IBM, 2013), taking as a factor extraction criterion an eigenvalue greater than 1 and interpreting, in multifactorial solutions, the rotated matrix with the varimax method. This exploratory analysis was performed with half of the database randomly selected (287 cases). The structure obtained in the exploratory factor analyses was subsequently examined in the second half of the database (267 cases) by a confirmatory factor analysis using the AMOS 22 program (Arbuckle, 2013). The internal consistency of each factor was obtained using Cronbach’s alpha formula.

Once the content and reliability of each factor were verified, indicators were formed for each one by averaging the items that comprise it. The hypothesis test of relationships between variables was performed developing a structural equation model using the AMOS 22 software (Arbuckle, 2013).

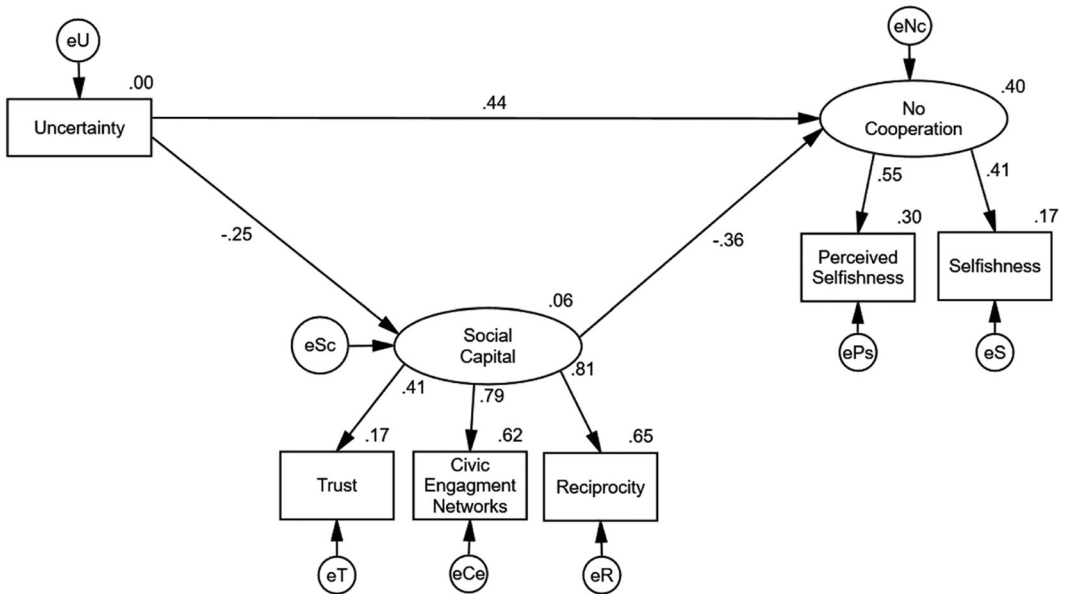
## 3 | RESULTS

Table 1 summarizes the main psychometric indicators of the instruments used resulting from the exploratory factor analysis and the calculation of its internal consistency.

As seen in Figure 2, a structural equation model (SEM) was designed to analyze the effects of uncertainty on noncooperation in the face of health contingency restrictions, both direct and through the reduction of social capital. The factor loadings of the observed variables on the latent variable of social capital are statistically significant, with values of CR more than 8.26 and  $p$  values less than 0.001. The same was observed in the factorial loads of the observed variables of the latent variable of noncooperation, with values of CR more than 5.36 and

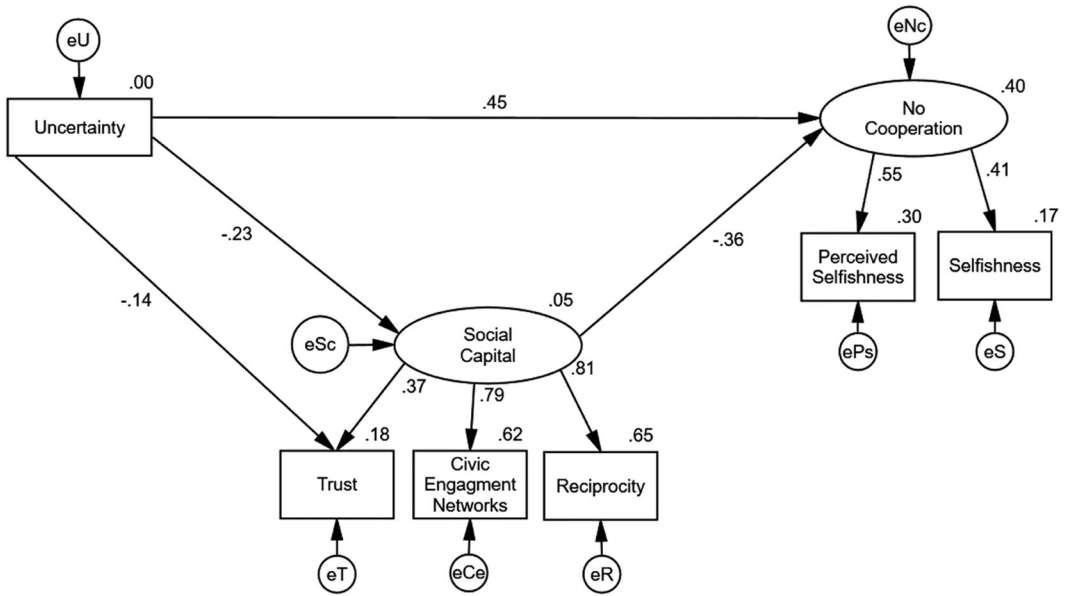
**TABLE 1** Descriptive statistics and psychometric properties of the instruments of social capital, noncooperation, and uncertainty

	Number of items	Mean	Standard deviation	Cronbach alpha	Explained variance (%)
<b>Social capital</b>					
Reciprocity	6	2.45	0.71	0.82	15.45
Civic engagements network	5	2.36	0.67	0.79	14.34
Trust	6	2.89	0.57	0.71	10.57
<b>Non-cooperation</b>					
Perceived selfishness	3	2.80	0.72	0.71	23.56
Selfishness	3	2.21	0.67	0.70	24.05
<b>Uncertainty</b>					
Uncertainty	5	2.56	0.69	0.75	41.27



**FIGURE 2** Structural equation model (SEM) analysis of uncertainty direct effects on the disposition of non-cooperation with others during the pandemic and moderated by social capital. Note: The model explains 40% of the variance of disposition of noncooperation with others during the pandemic restrictions, resulting from direct and indirect negative effects of uncertainty and direct negative effects of social capital

*p* values less than 0.001. According to the hypotheses, uncertainty has positive effects on noncooperation ( $CR = 5.10, p < 0.001$ ) and negative effects on social capital ( $CR = -4.66, p < 0.001$ ). In turn, social capital has statistically significant negative effects on noncooperation ( $CR = -3.80, p < 0.001$ ). In addition, an indirect effect of uncertainty on noncooperation moderated by social capital ( $\beta = 0.08$ ) is observed, which is statistically significant according to



**FIGURE 3** Structural equation model (SEM) analysis of uncertainty direct effects on the disposition of non-cooperation with others during the pandemic and moderated by social capital, with an additional direct path of uncertainty on trust. Note: The effect of the uncertainty on the trust component of social capital is incorporated, which is statistically significant and the goodness of fit of the model is improved

the Sobel test (Sobel, 1986) ( $z = -3.21, S2 = 0.03, p = 0.001$ ). The set of direct and indirect effects explains 40% of the variance of noncooperation, while the negative effect of uncertainty explains 6% of the variance of social capital. The model shows indices of adequate goodness of fit (RMR = 0.01; GFI = 0.99; AGFI = 0.97; CFI = 0.98; RMSEA = 0.04, CI 90% [0.01–0.07], PCLOSE = 0.48), except for the  $\chi^2$  indicator ( $\chi^2 = 16.15, gl = 7, p = 0.024$ ) (Kline, 2016).

An analysis of the variance discrepancies in the model allowed identification of an additional effect of the uncertainty on the trust component of social capital. As seen in Figure 2, uncertainty has a negative effect ( $CR = -3.41, p < 0.001$ ) on the tendency to trust neighbors, in addition to effects of uncertainty on social capital. This new model presents improvements in all its goodness of fit indicators compared with the previous model ( $\chi^2 = 4.63, df = 6, p = 0.59$ ; RMR = 0.007; GFI = 0.99; AGFI = 0.99; CFI = 1.00; RMSEA = 0.00, CI 90% [0.00–0.04], PCLOSE = 0.96) (Figure 3).

## 4 | DISCUSSION

The results presented in this study indicate that higher levels of uncertainty stemming from the COVID-19 sanitary contingency are associated with a greater disposition to harmful community effects, such as a lack of cooperation and a tendency to mistrust neighbors. More importantly, the results support the hypothesis that social capital, as a set of communitarian resources, protects the community against these adverse effects, directly diminishing a lack of cooperation, and through reductions in the uncertainty generated by the pandemic and its sanitary restrictions. However, it should be noted that this moderation effect should not be interpreted as longitudinal. It is possible (and desirable) to think that social capital interventions can be implemented to alleviate the impacts of a natural disaster on community cooperation. Notwithstanding, this hypothesis necessarily requires a later longitudinal and



experimental test, which is beyond the scope and the cross-sectional data analyzed here. More precisely, what these results indicate is that individuals that perceive its community high in social capital suffer less uncertainty in the face of the pandemic, which, in turn, reduces their willingness to be selfish and abstain from cooperating. Also, it is important to highlight that, although data collection for the present study was performed just before COVID cases in Mexico started to significantly rise at the start of May 2020 (Reuters COVID-19 Tracker, 2021), there is initial evidence supporting that health concerns in this specific period of time were associated to significant psychological effects (e.g., moderate to severe psychological distress, depressive and anxiety symptoms, as well as moderate to severe stress levels) in the Mexican population (Cortés-Álvarez et al., 2020).

Cooperation is understood as a practice where an individual or group invests part of their resources (e.g., time, money, and work) in a joint task with another individual or group to obtain a common benefit (Bowles & Gintis, 2011). Considering that this investment always involves some risk of the other investor or investors betraying our trust, for example, abstaining from their resources in the hope that our investment will be sufficient or appropriating the benefits obtained without sharing them. Since cooperation entails high risk, it has been necessary to explain how it has become a ubiquitous strategy in our social relationships. A first characteristic is that human beings tend to form groups and our cooperative links are concentrated in these groups, a phenomenon known as in-group bias (Hewstone et al., 2002), a strategy oriented towards the search for stable reciprocal links that decrease the risk of being betrayed by deserters (Yamagishi & Kiyonari, 2000).

This in-group bias evolved as a stable strategy in our species since the groups with a higher proportion of reciprocal cooperative links had adaptive advantages over other groups, achieving greater access to resources, security, and reproduction. This process enabled a more rapid division of groups, generating a higher number of them inheriting in-group bias as an adaptive cultural strategy (Nowak, 2006; Traulsen & Nowak, 2006). It is important to note that in-group bias does not necessarily imply hostility towards members of other groups (Brewer, 1999), although Choi and Bowles (2007) have proposed that this hostility known as parochialism and in-group bias have evolved together in our species.

Considering that organisms always evolve in a context of scarce resources and that greater scarcity increases the efforts of organisms to appropriate resources valuable for survival, (Grossman & Mendoza, 2003), Choi and Bowles (2007) argue that the conditions of scarcity typical in the first stages of the evolution of our species generated constant conflicts over access to resources. In these conflicts, groups with individuals willing to sacrifice themselves and its resources for the defense of others in their group (parochial altruism) had a better chance of survival, inheriting those dispositions to our species.

It is important to emphasize that, even though the scarcity typically associated with large-scale events tends to generate conflicts to appropriate valuable resources (Grossman & Mendoza, 2003), studies such as the one presented by Nie et al. (2020) show that it is also possible to find a greater willingness to cooperate in response to scarcity, which is reflected in the management of scarce resources that favors the majority. Similarly, Delay and Piou (2019) have shown through agent-based models that seasonality in resource scarcity is a structural factor that makes cooperation an adaptive strategy in small groups. Following the same argument, Kaplan et al. (2005) point out that, in the origins of our evolution, the challenge of hunting large prey that required the coordination of several individuals and distribution of food sources was fundamental to promote in-group cooperation as a central trait of our species.

Although these forms of cooperation associated with the in-group bias are fundamental for human well-being, the bonds with people who do not belong to a closer social nucleus can be equally valuable, as the theory of social capital proclaims. These bonds, which Granovetter (1983) calls "weak ties," have the advantage of allowing us access to social networks that are different from ours and thus to resources distinct from those that we already have in our social nucleus. For example, when a community of farmers establishes cooperative bonds with a community of hunters or fishermen, the exchanges are more valuable than those that could have been made with other members of the community that produce the same things. In this regard, previous studies show that weak ties are more useful than strong bonds when securing better employment opportunities (Yakubovich, 2005) and when

these are incorporated into new spaces in migration situations (Pfeffer & Parra, 2009). For these reasons, although concentrating trust and cooperation in our closest bonds can reduce the risk of being betrayed, dispensing our weak bonds with more distant groups, such as other unfamiliar neighbors, can deprive us of valuable resources, especially in a moment of crisis, like the one that current societies are experiencing due to the pandemic.

Social capital is approached in this study from the perspective of Putnam (1993), who conceives it as a resource that derives from the relationships and disposition of individuals, although it can only capitalize on the community as a whole. Insofar as it is perceived as oriented towards the achievement of community goals (e.g., solving some problem of access to services and combating insecurity), the strength of social capital and its achievements would benefit the entire community equally, without an individual being able to take these benefits himself, excluding the rest of the community. However, it must be recognized that other theoretical approaches conceive of social capital as a resource that can be capitalized individually. For example, Van Der Gaag and Snijders (2005) propose a measurement of the resources, knowledge, and contacts that an individual possesses and those possessed by other members of their social network (family, friends, and acquaintances). From a similar approach, Lin (2008) conceives social capital as an individual resource that comes from the connectivity properties of the social network. These approaches are not contrary to Putnam (1993) and may also be valuable for understanding social dynamics in the face of community risks. In this regard, Bian et al. (2020) already show that people with more of this social capital derived from the connectivity of individual networks managed to face the sanitary restrictions of the pandemic in China with less impact.

## 5 | CONCLUSIONS

As expected, the uncertainty associated with the start of the pandemic and its sanitary restrictions increases the tendency towards noncooperation, identifying that it also reduces trust towards neighbors. However, the quality of the social fabric, evaluated here by means of social capital, reduces the tendency to selfishness, and lack of cooperation. Part of this protective effect derives from its ability to reduce the uncertainty of the negative consequences that resulted from the crisis.

Social capital has been identified in empirical studies as a key component in the restoration of social order and economic growth in communities victimized by war (Colleta & Cullen, 2000; Ostrom & Ahn, 2009; Wakka, 2018). This study provides evidence for this notion and emphasizes the importance of strengthening the social fabric through programs that promote the development of social capital conditions in communities that are experiencing disaster or risk of conflict, as in the current pandemic.

### CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

### PEER REVIEW

The peer review history for this article is available at <https://publons.com/publon/10.1002/jcop.22699>

### DATA AVAILABILITY STATEMENT

The authors confirm that the data supporting the findings of this study are available within the article [and/or] its supplementary materials.

### ORCID

Christian E. Cruz-Torres  <https://orcid.org/0000-0002-4286-4697>

Jaime Martín del Campo-Ríos  <https://orcid.org/0000-0001-5098-4886>

## REFERENCES

- Arbuckle, J. L. (2013). Amos (Version 22.0) [Software]. Chicago: SPSS.
- Bian, Y., Miao, X., Lu, X., Ma, X., & Guo, X. (2020). The emergence of a COVID-19 related social capital: The case of China. *International Journal of Sociology*, 50(5), 419–433.
- Borunda, D. (2020). *Coronavirus: Mexico declares national health emergency, bans nonessential activity*. El Paso Times. <https://www.elpasotimes.com/story/news/health/2020/03/31/coronavirus-pandemic-mexico-declares-national-public-health-emergency/5093905002/>
- Bowles, S., & Gintis, H. (2011). A cooperative species, *Human reciprocity and its evolution*. Princeton University Press.
- Brewer, M. B. (1999). The psychology of prejudice: Ingroup love and outgroup hate? *Journal of Social Issues*, 55(3), 429–444.
- Brizi, A., Mannetti, L., & Kruglanski, A. W. (2016). The closing of open minds: Need for closure moderates the impact of uncertainty salience on outgroup discrimination. *British Journal of Social Psychology*, 55(2), 244–262.
- Choi, J. K., & Bowles, S. (2007). The coevolution of parochial altruism and war. *Science*, 318(5850), 636–640.
- Colleta, N. J. y., & Cullen, M. L. (2000). *Violent conflict, social capital and social cohesion: Case studies from Cambodia and Rwanda*. Social Capital Initiative. Working paper No. 23. The World Bank.
- Coronavirus confirmed as pandemic by World Health Organization. (2020). BBC. <https://www.bbc.com/news/world-51839944>
- Cortés-Álvarez, N. Y., Piñeiro-Lamas, R., & Vuelvas-Olmos, C. R. (2020). Psychological effects and associated factors of COVID-19 in a Mexican sample. *Disaster Medicine and Public Health Preparedness*, 14(3), 413–424.
- C-feeding. *Personality and Social Psychology Bulletin*, 33(1), 110–122.
- Cruz, C., & Contreras-Ibáñez, C. C. (2015). Confianza, normas de reciprocidad y redes de compromiso cívico: Una propuesta de evaluación comunitaria del capital social. In C. Charry (Ed.), *Capital social: Enfoques alternativos* (pp. 137–161). Anthropos Editorial; Ciudad de México, D.F.: Universidad Autónoma Metropolitana, Unidad Iztapalapa, División de Ciencias Sociales y Humanidades.
- Delay, E., & Piou, C. (2019). Mutual aid: When does resource scarcity favour group cooperation? *Ecological Complexity*, 40, 100790.
- Echebarria-Echabe, A. (2013). Mortality salience and uncertainty: Similar effects but different processes? *European Journal of Social Psychology*, 43(3), 185–191.
- Fritsche, I., & Hoppe, A. (2019). We supernaturals: Terror management and people's ambivalent relationship with nature. *Handbook of terror management theory* (pp. 157–178). Academic Press.
- Goldenberg, J. L., Pyszczynski, T., Greenberg, J., Solomon, S., Kluck, B., & Cornwell, R. (2001). I am not an animal: Mortality salience, disgust, and the denial of human creatureliness. *Journal of Experimental Psychology: General*, 130(3), 427–435.
- Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory*, 1, 201–233.
- Grossman, H. I., & Mendoza, J. (2003). Scarcity and appropriative competition. *European Journal of Political Economy*, 19(4), 747–758.
- Hewstone, M., Rubin, M., & Willis, H. (2002). Intergroup bias. *Annual Review of Psychology*, 53(1), 575–604.
- IBM Corp. Released. (2013). IBM SPSS Statistics for Windows, Version 22.0, Armonk, NY: IBM Corp.
- International Labor Organization. (2021). ILO Monitor: COVID-19 and the world of work. Seventh edition Updated estimates and analysis. [https://www.ilo.org/wcmsp5/groups/public/-dgreports/-dcomm/documents/briefingnote/wcms\\_767028.pdf](https://www.ilo.org/wcmsp5/groups/public/-dgreports/-dcomm/documents/briefingnote/wcms_767028.pdf)
- Kaplan, H., Gurven, M., Hill, K., & Hurtado, A. M. (2005). The natural history of human food sharing and cooperation: A review and a new multi-individual approach to the negotiation of norms, *Moral sentiments and material interests: The foundations of cooperation in economic life* (Vol. 6, pp. 75–113). The MIT Press.
- Kline, R. B. (2016). *Principles and practice of structural equation modelling*. The Guilford Press.
- Koffman, J., Gross, J., Etkind, S. N., & Selman, L. (2020). Uncertainty and COVID-19: How are we to respond? *Journal of the Royal Society of Medicine*, 113(6), 211–216.
- Lambert, A. J., Eadeh, F. R., Peak, S. A., Scherer, L. D., Schott, J. P., & Slochower, J. M. (2014). Toward a greater understanding of the emotional dynamics of the mortality salience manipulation: Revisiting the “affect-free” claim of terror management research. *Journal of Personality and Social Psychology*, 106(5), 655–678.
- Lin, N. (2008). A network theory of social capital. In D. Castiglione, J. W. Van Deth, & G. Wolleb (Eds.), *The handbook of social capital* (pp. 50–70). Oxford University Press.
- Maas, M., & van den Bos, K. (2011). Real personal uncertainty induced by means of task-related feedback: Effects on reactions to voice and no-voice procedures. *Social Justice Research*, 24(2), 107–125.
- Mamun, M. A., & Griffiths, M. D. (2020). First COVID-19 suicide case in Bangladesh due to fear of COVID-19 and xenophobia: Possible suicide prevention strategies. *Asian Journal of Psychiatry*, 51, 102073.
- Montoya, J. (2020). Hidalgo: Reubicar lugar de descanso para médicos, luego de agresiones. <https://www.jornada.com.mx/ultimas/estados/2020/05/13/hidalgo-reubicar-lugar-de-descanso-para-medicos-luego-de-agresiones-8529.html?fbclid=IwAR3df8rk646-e0R4ygmJTHJTSR0rnliDQW9hvWFplrXXtXWl9ke6gGap-00>

- Nie, Z., Yang, X., & Tu, Q. (2020). Resource scarcity and cooperation: Evidence from a gravity irrigation system in China. *World Development*, 135, 105035.
- Nowak, M. A. (2006). Five rules for the evolution of cooperation. *Science*, 314(5805), 1560–1563.
- Ostrom, E. (2011). El gobierno de los bienes comunes: La evolución de las instituciones de acción colectiva. Fondo de Cultura Económica.
- Ostrom, E., & Ahn, T. K. (2009). The meaning of social capital and its link to collective action, *Handbook of social capital: The troika of sociology, political science and economics* (pp. 17–35). Edward Elgar Publishing.
- Palma, L., Rubio Barnetche, L., & Lecona, O. (2020). COVID-19 en México: Diversas instituciones y autoridades suspenden sus actividades. Holland & Knight. <https://www.hklaw.com/en/insights/publications/2020/03/covid19-en-mexico-diversas-instituciones-y-autoridades-suspenden>
- Pereira, M., & Oliveira, A. M. (2020). Poverty and food insecurity may increase as the threat of COVID-19 spreads. *Public Health Nutrition*, 23(17), 3236–3240.
- Pfeffer, M. J., & Parra, P. A. (2009). Strong ties, weak ties, and human capital: Latino immigrant employment outside the enclave. *Rural Sociology*, 74(2), 241–269.
- Putnam, R. D. (1993). What makes democracy work? *National Civic Review*, 82(2), 101–107.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon and Shuster.
- Pyszczynski, T., Lockett, M., Greenberg, J., & Solomon, S. (2020). Terror Management Theory and the COVID-19 Pandemic. *Journal of Humanistic Psychology*, 61(2), 173–189.
- Renkema, L. J., Stapel, D. A., & Van Yperen, N. W. (2008). Go with the flow: Conforming to others in the face of existential threat. *European Journal of Social Psychology*, 38(4), 747–756.
- Reuters COVID-19 Tracker. (2021). Mexico: The latest coronavirus counts, charts and maps. *Reuters Graphics*. <https://graphics.reuters.com/world-coronavirus-tracker-and-maps/countries-and-territories/mexico/>
- Rojas, M. (2020). Habitantes de comunidad en BC impiden acceso a turistas por covid-19. *Milenio*. <https://www.milenio.com/estados/coronavirus-baja-california-sur-pobladores-bloquean-turistas>
- Routledge, C., & Arndt, J. (2008). Self-sacrifice as self-defense: Mortality salience increases efforts to affirm a symbolic immortal self at the expense of the physical self. *European Journal of Social Psychology*, 38(3), 531–541.
- Sobel, M. E. (1986). Some new results on indirect effects and their standard errors in covariance structure models. In N. B. Tuma (Ed.), *Sociological methodology* (pp. 159–186). Jossey-Bass.
- Strachman, A., & Schimel, J. (2006). Terror management and close relationships: Evidence that mortality salience reduces commitment among partners with different worldviews. *Journal of Social and Personal Relationships*, 23(6), 965–978. SurveyMonkey, n.d. [Internet]. <http://www.surveymonkey.com>
- Traulsen, A., & Nowak, M. A. (2006). Evolution of cooperation by multilevel selection. *Proceedings of the National Academy of Sciences of the United States of America*, 103(29), 10952–10955.
- Van den Bos, K., Poortvliet, P. M., Maas, M., Miedema, J., & Van den Ham, E. J. (2005). An enquiry concerning the principles of cultural norms and values: The impact of uncertainty and mortality salience on reactions to violations and bolstering of cultural worldviews. *Journal of Experimental Social Psychology*, 41(2), 91–113.
- Van Der Gaag, M., & Snijders, T. A. (2005). The resource generator: Social capital quantification with concrete items. *Social Networks*, 27(1), 1–29.
- Wakka, A. K. (2018). Community social capital improvement in conflict resolution through mediation: Case study in KHDTK Mengkendek. Tana Toraja Regency. *Jurnal Penelitian Sosial dan Ekonomi Kesehatan*, 15(2), 79–92.
- World Health Organization. (2021). Weekly epidemiological update - 19 January 2021. <https://www.who.int/publications/m/item/weekly-epidemiological-update-19-january-2021>
- Yakubovich, V. (2005). Weak ties, information, and influence: How workers find jobs in a local Russian labor market. *American Sociological Review*, 70(3), 408–421.
- Yamagishi, T., & Kiyonari, T. (2000). The group as the container of generalized reciprocity. *Social Psychology Quarterly*, 63, 116–132.

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