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Testing a coping scale in Mexican families in the face of the COVID-19 pandemic: Exploring the psychometric properties*

Xolyanetzin Montero-Pardo,[1] Marla Naiví Toiber-Rodríguez,[2] Joaquín Alberto Padilla-Bautista,[3] Cintia Aguilar-Delgadillo,[4] Fátima Sagrario Espinoza-Salgado,[4] Ángel Eduardo Velasco-Rojano[5]

[1] Escuela de Psicología Mazatlán, Universidad Autónoma de Sinaloa, Sinaloa, México.
[2] Servicio de Salud Mental, Clínica Especializada Condesa-Iztapalapa Dr. Jaime Sepúlveda-Amor, Ciudad de México, México.
[3] Facultad de Ingeniería y Negocios Guadalupe Victoria, Universidad Autónoma de Baja California, Baja California, México.
[4] Programa de Maestría y Doctorado en Psicología, Universidad Nacional Autónoma de México, Ciudad de México, México.
[5] Laboratorio de Estudios de Salud y Educación, Universidad del Valle de México, Ciudad de México, México.

Correspondence:
Marla Naiví Toiber Rodríguez
Servicio de Salud Mental, Clínica Especializada Condesa-Iztapalapa Dr. Jaime Sepúlveda-Amor.
Combate de Celaya S/N,
Unidad Habitacional Vicente Guerrero,
C.P. 09200 Iztapalapa,
Ciudad de México, México.
Phone: +52 55 5038-1700
Email: naivi17@hotmail.com

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ABSTRACT

Introduction. The rapid spread of the pandemic due to the SARS-CoV-2 virus, more commonly known as COVID-19, required sanitary measures, such as social distancing and quarantining, which represented non-normative stressors for Mexican families. **Objective.** Obtaining evidence of the validity and reliability of a family coping scale in the face of the COVID-19 pandemic. **Method.** A questionnaire was developed containing 48 items, and responses were collected using Google forms with a total of 558 participants. Exploratory and confirmatory factor analyses were conducted to obtain the reliability and validity of the scale. **Results.** The instrument is made up of six factors that explain 67.27% of the variance. The scale had a McDonald's omega coefficient of .82, and the model had a good fit with most values equal to or higher than .90. **Discussion and conclusions.** The final items showed proper theoretical congruence and good indicators of fit. These results allow for the assertion that factors 1, 2, 5, and 6 allude to a good family adaptation in the face of the pandemic. Meanwhile, factors 3 and 4 indicate a poor family adaptation. Among the main contributions of this study is that this is one of the first scales to address the subject in Mexico, followed by statistical data that suggests the scale possesses appropriate psychometric properties to be used in the Mexican population.

Keywords: COVID-19, pandemic, family, family stress, family coping.

RESUMEN

Introducción. La rápida propagación de la pandemia por el virus SARS-CoV-2, más conocido como COVID-19, requirió medidas sanitarias, como el distanciamiento social y la cuarentena, que representan estresores no normativos para las familias mexicanas. **Objetivo.** Obtención de evidencia de la validez y confiabilidad de una escala de afrontamiento familiar ante la pandemia por COVID-19. **Método.** Se desarrolló un cuestionario que contenía 48 ítems y las respuestas se recopilaron mediante un formulario de Google con un total de 558 participantes. Se realizó un análisis factorial exploratorio y confirmatorio para obtener la confiabilidad y validez de la escala. **Resultados.** El instrumento está compuesto por seis factores que explican el 67.27% de la varianza. La escala tuvo un coeficiente Omega de McDonald's de .82, y el modelo tuvo un buen ajuste con la mayoría de los valores iguales o superiores a .90. **Discusión y conclusiones.** Los ítems finales mostraron adecuada congruencia teórica y buenos indicadores de ajuste. Estos resultados permiten afirmar que los factores 1, 2, 5 y 6 aluden a una buena adaptación familiar ante la pandemia. Por su parte, los factores 3 y 4 indican mala adaptación familiar. Entre los principales aportes de este estudio se encuentra que esta es una de las primeras escalas que aborda el tema en México, seguido de datos estadísticos que sugieren que la escala posee propiedades psicométricas adecuadas para ser utilizada en población mexicana.

Palabras clave: COVID-19, pandemia, familia, estrés familiar, afrontamiento familiar.

* On the following link, find the final version of the scale in Spanish: https://www.researchgate.net/publication/342425763_VERSION_FINAL_ESCALA_DE_AFRONTAMIENTO_EN_FAMILIAS_MEXICANAS_ANTE_LA_PANDEMIA_DE_COVID-19

INTRODUCTION

Families are seen as systems constructed through the exchanges and interactions between the different units that make them up, namely the subsystems. These include the individual, conjugal, parental, and fraternal subsystems (Fruggeri, 2016; Minuchin & Fishman, 2006). At the same time, dyads such as wife-husband, parent-child are subsystems and can be made up of the interests, sex, or their function (Minuchin, 1985).

Family stress represents a tension in the family system (Boss, Bryant, & Mancini, 2017). This stress can arise from normative or non-normative events that require the family to adapt to preserve its homeostasis (Chaney, 2020). Family coping is the ability to mobilize internal and external resources to act in the face of a problem, searching for solutions that minimize or neutralize the impact an event has; in this case, family coping can be adaptive or non-adaptive (González & Lorenzo, 2012). From the ABC-X model, family coping interacts with the meanings and resources, and it includes the concrete efforts to manage stressful events (Price, Price, & McKenry, 2016).

The ABC-X model (Hill, 1971; 1986) allows for the analysis of factors that determine the relationships between stressful events and family crises. In this model, A represents the stressor, usually a change or event that could trigger a crisis. B represents the resources that the family has to moderate the impact from the stressor, avoid a crisis, or face it. C represents the perception of the stressful event, how manageable it is for the family, and if it represents an opportunity for growth or disaster. Finally, X represents the result from the interaction between A, B, and C, and the degree in which the stressful event precipitates a crisis or adaptation in the family (Rosino, 2016; Wilmoth & Smyser, 2009).

According to the ABC-X model (Hill, 1971; 1986), there are two possible responses to stress: either a good response or a bad one. A good adaptation response in the family system shows alterations to the internal functions such as behaviors, rules, roles, and perceptions; however, they all achieve proper family operations (Price et al., 2016). Therefore, family resources act as mediators of the impact of the pandemic and its health measures, as they are internal attributes that protect the family and promote adaptation (Lavee, McCubbin, & Patterson, 1985; Price et al., 2016). The perception of whether or not the pandemic is a manageable event, and a situation from which one can learn from influences (Lavee et al., 1985; Price et al., 2016) the psychological reactions (depressive symptoms and anxiety) in the family unit (Haider, Tiwana, & Tahir, 2020).

The COVID-19 pandemic can be understood as a stressful event, whose outcome may represent a crisis. Families regularly respond to maladaptive behaviors such as disorganization, evasive behaviors, and interpersonal violence within the family system (Rosino, 2016). Violence is associated with social distancing, which is imposed as a health measure and impacts how family members access support and the separation of relationships (John, Casey, Carino, & McGovern, 2020; Kim & Zulueta, 2020; Usher, Bhullar, Durkin, Gyamfi, & Jackson, 2020). Furthermore, the economic crisis as a result of the pandemic can increase parental anguish, domestic violence, and violence towards children, creating a cascading effect that places a child and their ability to cope in danger (Cluver et al., 2020; Fraenkel & Cho, 2020; Prime, Wade, & Browne, 2020).

How families respond to a stressful event, namely their coping strategies were studied mainly in the case of normative stressful events (Daneshpour, 2017; González & Lorenzo, 2012; Janis, Callahan, Shelton, & Aubuchon-Endsley, 2016; Wilmoth & Smyser, 2009). This includes, for instance, families where there are members with chronic illnesses (Coppetti et al., 2019; Nabors et al., 2018; Park & Choi, 2017; Rolland, 2000; Schaffiner, 2014), autism (Krakovich, McGrew, Yu, & Ruble, 2016), elderly abuse perpetrated by informal caregivers (Lee, 2009), and those with disabilities (Ricketts, 2020). The topics of most interest have been how parents cope (Craig et al., 2019) and the role of informal caregivers or caretakers (Murphy, Nalbone, Wetchler, & Edwards, 2015). Studies that focus on non-normative events allude to the impact of natural disasters, such as fires, tsunamis and hurricanes (Felix et al., 2015), wars (Rosino, 2016) and factors that favor resilience (Vigil & Geary, 2008). Meanwhile, family coping strategies in the face of a pandemic allude to the 2009 H1N1 influenza, where studies explored the reaction of fear amongst children (Remmerswaal & Muris, 2011), and the perception of risk amongst parents (Prati, Pietrantoni, & Zani, 2011). Regarding the COVID-19 pandemic, there are some Mexican instruments such as the one by Ramos-Lira et al. (2020) that describe the coping strategies and the emotional responses of the Mexican population to in the face of the quarantine. The Zamarripa et al. (2020) instrument measures the level of stress caused by social distancing depending on the sex of the person, whilst the instrument by Torres et al. (2020) describes the socio-family changes in adults (parents of children between one and 12-years-old). However, there is no instrument that describes families coping strategies by subsystems in the face of the current pandemic.

The above literature review demonstrates that while different instruments exist to measure family coping in the face of stressful events, such as the Family Crisis-Oriented Evaluation Scale (F COPES; McCubbin, Thompson, & McCubbin, 1997), the Short Cope inventory (Inventario Breve de Cope; Carever, 1997), the Stress Coping Checklist (Lazarus & Folkman, 1984), none of them has focused on pandemics. They have also not been adapted for the Mexican population.

Following the previous section, the objective of the present study was to construct a valid and reliable scale to

measure family coping strategies, both adaptive and maladaptive, in the face of the COVID-19 pandemic.

METHOD

Design of the study

This was an instrument study (Montero & León, 2007).

Description of the sample

The study used a convenience, non-probabilistic sample selection strategy (Clark-Carter, 2019). The size of the sample was determined to have at least 10 responses for each item (Carretero-Dios & Pérez, 2005). The selection criteria of the sample were: to be at least 18 years old or older, of Mexican nationality, and to be living in Mexico. The application was conducted virtually with people from different states of Mexico, starting on the 10th of April 2020, until the 31st of May 2020, during phase 1 and 2 of the Jornada Nacional de Sana Distancia (National Period of Social Distancing; Gobierno de México, 2020).

Measurements

A family coping scale was constructed with a total of 48 items on a Likert-type scale with five answer options, ranging from never to always. A sociodemographic questionnaire was also included.

Procedures

A total of 50 items were created based on the structural model (Minuchin & Fishman, 2006) and the ABC-X model (Hill, 1971; 1986) to evaluate the theoretical dimensions mentioned earlier. The items were then reviewed by three expert judges on the topic (systemic family therapists), who examined the grammatical coherence and relevance of the items. The experts reached a consensus regarding the deletion of two items because their content was already evaluated in other items. The resulting version was then tested on 30 participants to evaluate the comprehension and clarity of the instrument. No additional modifications were required as the test was clear for the participants. Afterwards, the instrument comprising of 48 items was distributed through Facebook, WhatsApp, and Instagram. The application was conducted using a Google Docs form. The call to answer the instrument was open to everyone, and those who participated did so voluntarily and confidentially. Participants gave their consent after receiving information regarding the research (objectives and relevant instructions). Participants did not receive any kind of compensation, and to avoid measurement bias caused by the online application, repeated questionnaires were deleted, as well as those of non-Mexican participants.

Statistical analyses

Exploratory and confirmatory factor analyses were conducted to determine the conceptual structure of the scale. McDonald's omega (Hayes & Coutts, 2020) was calculated to determine the reliability of the instrument.

These analyses were computed with the Statistical Package for the Social Sciences (SPSS) 25 and AMOS 24. The estimation of the parameters of the goodness of fit was performed with the maximum verisimilitude method using the Chi-square (χ^2) indices expected indicator > .05, relative chi-square (χ^2/df), expected indicator < 3, Goodness-of-Fit Index (GFI) expected indicator .90 to 1, Adjusted Comparative Fit Index (CFI) expected indicator .90 to 1, Root Mean Square Error of Approximation (RMSEA) expected indicator < .05 and the Standardized Root Mean Square Residual (SRMR) expected indicator < .05 Tucker-Lewis coefficient (TLI) expected indicator .90 to 1 (Byrne, 2016; Hair, Black, Babin, & Anderson, 2019; Iraurgi, Sanz, & Martínez-Pampliega, 2009; Littlewood Zimmerman & Bernal García, 2011).

Ethical considerations

The Ethics Committee from the Faculty of Engineering and Business, Guadalupe Victoria from the Universidad Autónoma de Baja California properly accepted the ethical considerations for the protocol of this study, which registration number is: POSG/021-1-02. All procedures of the study considered Helsinki's statements and agreements.

The national (Sociedad Mexicana de Psicología, 2010) and international guidelines (American Psychological Association [APA], 2017) for psychological research with humans through digital media were followed (APA, 2020). The form explicitly stated that participants could solicit any information or help from the research leaders if they had questions regarding the study. For this, the Google Forms document included the contact information of the researchers. To ensure the anonymity and confidentiality of participants, no personal identification data was collected. Participants who requested help were referred to the specialized national institutions of mental health.

RESULTS

The sample was comprised by a total of 558 participants, of which 19% were men and 81% were women. Two subsamples were selected at random with an equivalent number by sex for each of the analysis.

The exploratory factor analysis was conducted with a subsample of 318 participants, of which 159 were men

and 159 were women. This number exceeded the required number of respondents necessary per item (at least five) for psychometric validity (Nunnally & Berstein, 1995). There was no missing data. Participants in this subsample were between 18 and 77 years old, with a mean of 34 years old. 49% of the sample had a bachelor's degree and 27% a high school degree; 35% were professionals, and 30% students; 47% were single and 36% married. A total of 143 of the

Table 1
Factorial solution, McDonald's omega, measures of central tendency and dispersion (n = 279)

		Factors					
	Items	*1*	*2*	*3*	*4*	*5*	*6*
14.	In my family, we can talk openly about each other's concerns.	.837	.191		.141		.136
3.	In my family, we can talk about the sadness and distress that we feel.	.805	.170		.152		
13.	At home, we are used to talking about our issues.	.785	.135		.216		.184
8.	In a time of crisis, members of my family can look at each other for support.	.770	.195	-.102			.191
4.	The members of our family easily show affection and interest in each other.	.753	.178		.121		.142
7.	If I have any issues, my family is very willing to help me out.	.722	.152		.112		.180
1.	In my family, it is normal to show both pleasant and unpleasant emotions.	.677	.225			.131	
12.	When there are differences in the way we see things, the members of my family can talk about them.	.672			.154	-.129	.345
11.	In my family, we prefer to say things directly, we avoid beating around the bush.	.661					.274
33.	In my family, mom and dad support each other.	.184	.876		.122		
32.	In my family, mom and dad talk about their concerns with each other.	.226	.858	.126	.109		
31.	In my family, mom and dad have fun together.	.175	.856	.146	.171		
30.	In my family, mom and dad support each other emotionally.	.204	.805	.167			.113
38.	In my family, mom and dad interact a lot with their children.	.134	.652	.195	.407	.166	
39.	In my family, dad plays more with the children	.140	.592	.183	.443	.219	
34.	In my family, mom interacts more with the children.	.109	.550		.491	.268	
35.	In my family, mom plays more often with the children.	.182	.522		.500	.295	
28.	In my family, mom and dad shout at each other more frequently.			.912		.107	
26.	In my family, mom and dad/the couple fight with each other more frequently.		.113	.885		.155	
27.	In my family, mom and dad can never agree on anything.			.867		.112	
29.	In my family, there is physical violence between mom and dad.		.256	.840			
48.	In my family, mom and dad try to emotional support each other.	.165	.190		.820		
46.	In my family, the siblings have improved their relationship.	.134	.194		.818		
45.	In my family, parents and children share pleasant and/or funny experiences.	.272	.512		.555	.121	.114
44.	In my family, parents and children have developed ways to face the pandemic.	.221	.473		.521	.196	.136
47.	In my family, the siblings are jealous of each other for the attention of their parents.	.145		.361	.373	.280	-.235
42.	In my family, the children are more restless.		.171	.102	.106	.868	
43.	In my family, the children are more demanding.		.152	.151	.140	.859	
37.	In my family, mom hits the children with more frequency.			.314	.154	.622	
5.	In my family, it is clear who makes the decisions.	.196					.767
6.	When a rule is broken at home, we are clear on what the consequences will be.	.375	.121				.679
16.	At home, it is clear who is the breadwinner.	.278					.655
17.	In my family, we had to modify the things that each one of us is responsible for.	.210					.479
	Explained variance	17.38	15.73	10.70	9.66	7.18	6.60
	Mean	3.50	4.04	2.41	3.80	2.93	3.47
	Standard deviation	.82	.92	1.30	.88	1.40	.79
	McDonald's omega	.924	.923	.926	.775	.805	.679

participants belonged to nuclear families, 99 participants belonged to extended families, 40 belonged to families without children, 29 participants were single parents, and seven participants belonged to reconstituted families.

A reliability analysis was conducted for each theoretical dimension. The corrected item-total correlations below .3 were considered low. This procedure allowed for the rejection of items 2, 9, 15, 19, 21, 22, 23, 24, 25, 36, and 41. A principal component analysis with orthogonal rotation was conducted through which items with factorial weights lower than .3 were excluded, which had no theoretical congruence within the factor and groupings of less than three items in a factor. These were items 10, 18, 20, and 40.

The value of the McDonald's omega from the factor analysis of the 33 items from the scale was .90 and was made up of six factors which can be seen in Table 1. Bartlett's test of sphericity was significant (7522.37, df = 528, $p < .001$), and the Kaiser-Meyer-Olkin measure of sampling adequacy was adequate (.891). The eigenvalues higher to one showed the existence of six factors. This solution converged with eight iterations and explains 67.27% of the variance.

The exploratory factor analysis shows evidence of construct validity. However, to verify the factor structure, a confirmatory factor analysis was conducted with structural equations modeling using the program AMOS 24.

For the confirmatory factor analysis, 240 participants were selected (120 men and 120 women). This is a large enough sample for a maximum verisimilitude analysis (Byrne, 2016). There was no missing data. The age of participants ranged between 18 and 72 years old, with a mean of 35.4 years old. 52% had a bachelor's degree and 20% a high school degree; 36% were professionals and 23% students; 45% were single and 39% married. 111 participants belonged to nuclear families, 68 participants belonged to extended families, 29 participants were single-parent families, and six participants belonged to reconstituted families. In order to have adjustment indicators within the established parameters, items 11, 12, 13, 14, 14, 17, 17, 34, 35, 38, 39, 44, and 45 were eliminated, as these items accumulated a large amount of error.

The confirmatory factor analysis made up of 23 items and six factors showed a $\chi^2/df = 2.0$, GFI = .85, CFI = .92 RMSEA = .06 and SRMR = .06, as well as a TLI of .91, which indicates that at least 91% of the covariance of the data can be reproduced by the model. These indicators allow for the assertion that the model has a good fit (Bentler, 1990; Byrne, 2016; Hu & Bentler, 1999). The standardized factor weights and the covariances between the factors are shown in Figure 1.

The six factors consist of the following:

1. "Communication and family system support," which made up items 14, 3, 8, 4, 7 and 1;
2. "Collaboration and spousal support," made up items 32, 30, 31, and 33;
3. "Marital violence" made up items 29, 28, 27, and 26;
4. "Fraternal support" made up items 48, 47, and 46;
5. "Mother-child conflictive interactions" made up items 37, 42, and 43;
6. "Reorganization of family roles," made up items 5, 6, and 16.

McDonald's omega value was .802 for the final scale, composed of 23 items. McDonald's omega for Factor 1 = .908, Factor 2 = .948, Factor 3 = .848, Factor 4 = .812, Factor 5 = .860 and Factor 6 = .694 (Hair et al., 2019).

A Student's t-test was done to understand if the total score or the found dimensions from the validity process

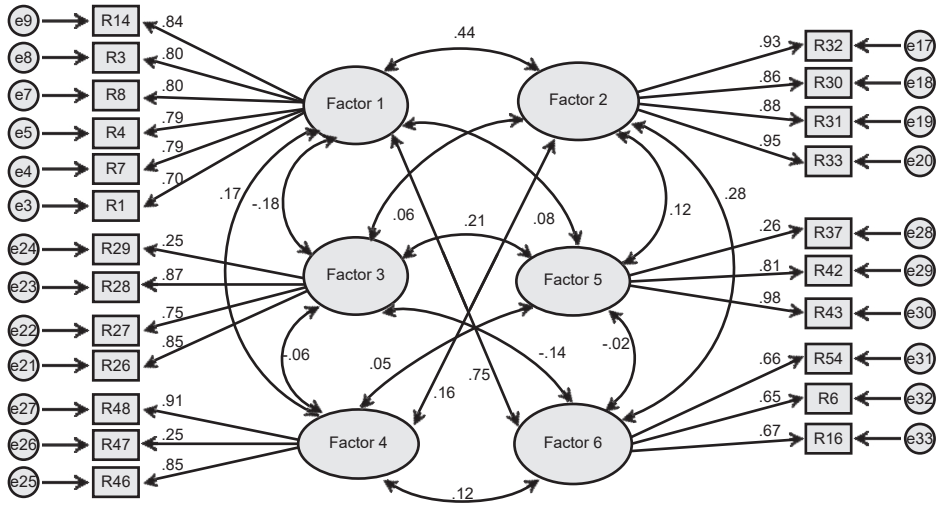

Figure 1. Confirmatory factor analysis model (n = 240).
Chi-Square = 447.79, df = 215, p = .001.

Table 2
Test of differences by sex for each one dimension of the instrument

	Men (n = 120)		*Women (n = 120)*				*Total score*	
	Mean	*SD*	*Mean*	*SD*	*t*	*Sig.*	*Minimum*	*Maximum*
Factor.1	3.62	.77	3.65	.96	.25	.81	1.33	5
Factor.2	3.68	1.31	3.38	1.51	1.69	.09	1	5
Factor.3	1.82	.76	1.69	.65	1.44	.15	1	4.25
Factor.4	2.64	1.05	2.61	1.13	.22	.83	1	5
Factor.5	2.18	.93	2.36	.98	1.46	.14	1	5
Factor.6	3.71	.79	3.78	.81	.70	.48	1	5
Total	3.01	.51	2.97	.56	.58	.57	1.35	4.26

tended to vary depending on the sex of participants using the same sample that was used for the confirmatory factor analysis. Results from the analysis did not show any significant differences for the subdimensions or the total scores. These results can be seen in Table 2.

DISCUSSION AND CONCLUSION

The instrument shows an adequate theoretical grouping and a well-explained variance above 50%. The McDonald's omega of Factors 1 (.924), 2 (.923) and 3 (.926) showed an excellent reliability. Factors 4 (.775) and 5 (.805) showed adequate reliability above the norm (above .7; Hair et al., 2019). Factor 6 (.679) showed a reliability below .7, which is an acceptable alpha value because the factor has adequate content validity and less than 10 items (Loewenthal, 2001). At the same time, it is important to consider that this is an exploratory study (Nunnally & Berstein, 1995).

The final items show adequate theoretical congruency and good fit indicators. Factors 1, 2, 4, and 6 allude to adaptive family coping in the face of the pandemic. Factors 1 and 6 refer to the total family system (Minuchin & Fishman, 2006). Factor 2 corresponds to the conjugal subsystem and Factor 4 to the fraternal subsystem. Therefore, the family resources were differentiated by studying the subsystem. This highlights the complexity of being a part of a subsystem with certain characteristics depending on the functions of each member with the objective of preserving the continuity of the family system.

Factors 3 and 5 imply family maladjustment, the former refers to violence in the conjugal subsystem. Factor 3 was also identified in couples during the pandemic in other studies (Fraenkel & Cho, 2020). Factor 5 corresponds to conflictive interactions in relationships between the parental and children subsystems. This can be explained from the need for the boundaries between the subsystems to be clear in order to achieve better behavioral control of children, without the need to use coercion or violence (Epstein, Baldwin, & Bishop, 1983; Minuchin, 1985).

A relevant fact to mention is that items regarding coping communication strategies and support between family members were combined to create the "Communication and Family" support system Factor. This is because through communication the family members can express their needs of material or emotional support. Something similar can be observed in the Family Adaptability and Cohesion Evaluation Scale, where communication is the link between cohesion and flexibility within the family, allowing family members to recognize and demonstrate their support needs (Martínez-Pampliega, Merino, Iriarte, & Olson, 2017).

Concerning coping strategies of the conjugal subsystem, two main strategies were found, one oriented towards physical and psychological violence, and the other towards collaboration and conjugal support. The latter refers to couples having fun, talking, and supporting each other. When a couple faces conflict, they can deal with it positively or negatively. Dealing positively means that there is a conciliation of different points of view in an environment of creativity with openness to search for new solutions. However, when conflict is dealt with negatively, there is a struggle between opponents in a destructive environment (Rodríguez Estrada & Ramos Silva, 1988). Regarding couple violence, it could be considered situational violence within the couple, meaning that it is symmetric and two-way, and emerges from conflict and tends to increase if it is not solved (Méndez-Sánchez & García-Méndez, 2015). Nevertheless, it is important to focus on the increase of violence against women and girls during the current COVID-19 pandemic and how it is linked to quarantine measures. Similarly, the increase of violence against women and girls was also found by researchers during the Ebola pandemic in East Africa (John et al., 2020).

Regarding coping strategies of the fraternal subsystem, the three initial items were maintained kept, comprising of fraternal support. Social support between siblings at the beginning of childhood has a particularly important role for

adjustment during this time. Social support between siblings is also linked to the acceptance of peers, social competency, academic commitment, and mental health in adulthood (Feinberg, Solmeyer, & McHale, 2012).

Based on the theoretical evidence of model the ABC-X (Hill, 1971; 1986) and the family structure (Minuchin, 1985), it was considered important to describe the coping strategies that made up the final version of the instrument. The adaptive resources are *communication and support from the family system*, which refer to the expression of affective needs and support between all the family members clearly and directly (Epstein et al., 1983; McCubbin et al., 1980). *Collaboration and conjugal support*, a resource from the conjugal subsystem, aids in the adaptation to new situations (Rosino, 2016) through teamwork and decision making considering two positions; *fraternal support*, which includes siblings and favors adequate coping with a stressful event through fellowship and relationships of collaboration, sharing, negotiation, envy, and peer fights (Eguiluz, 2004; Minuchin, 1985). The second position, *reorganization of family roles*, refer to the clarity regarding the hierarchies and internal functions of each family member of the family system (Wilmoth & Smyser, 2009).

At the same time, non-adaptive strategies (behavioral and relational difficulties) are *conjugal violence*, referring to behaviors and ways of relating between the spouses that cause direct damage to the total family system (Price et al., 2016); *conflictive mother-child interactions*, comprising ways of behaving and relating to each other that generate difficulties to establish limits between the parental and filial subsystems (Epstein et al., 1983).

Despite the virtual application, the results were not affected as scientific evidence demonstrates that there are no differences between paper and pencil applications and electronic applications in their psychometric structure (Barrigón et al., 2017; Campbell, Ali, Finlay, & Salek, 2015). This makes it a good research practice (Mental Health Commission of Canada, 2014).

However, the present study had limitations such as the sensitivity of the sample. A suggestion would be to improve the indices of fit of the model through restructuring the items and creating new items and open questions or other exploratory techniques that allow for the investigation of the construct of family coping in this population for future research. Additionally, the application of these items focused on the evaluation of this sole stressful non-normative event, without considering other stressors that could generate a family crisis such as the passing of a family member after coming down with the virus. Nevertheless, this is an initial contribution to research that evaluates the family coping strategies in the face of a non-normative crisis, such as the emergence of a chronic illness in a family member, a natural disaster, a divorce, unemployment, among others, and is therefore vital, especially now during the COVID-19 pandemic.

The statistical data allows for the conclusion that this scale possesses adequate psychometric properties to be used in the Mexican population. A fundamental contribution of this instrument is that it can be used to evaluate every type of family, as it identifies both general coping strategies of the whole subsystem and specific strategies in the different subsystems. At the same time, the instrument helps to integrate diverse family configurations different from nuclear families. While there are instruments in Mexico that evaluate coping (Balcázar, Bonilla, Gurrola, Trejo, & Zanatta, 2008; González, 1992; López, Reyes-Lagunes, & Rivera, 1998) and coping in the face of the COVID-19 pandemic (Ramos-Lira et al., 2020), researchers did not find any instruments that measures family coping in the face of a pandemic from the ABC-X model, or the systemic family perspective, highlighting the relevance of the present study.

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Conflict of interest

The authors declare there are no conflicts of interest.

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