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Validation of a Scale of Post-traumatic Stress Traits in the Mexican Youth Exposed to Social Violence

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ABSTRACT

There is a high incidence of post-traumatic stress symptoms found in youth groups that live in areas that suffer contextual violence. The validated scale, "scale of post-traumatic stress traits in youths exposed to social violence", summarizes the individual symptomatic incidence, helping researchers and decision makers, interested in applied areas, to perform strategies for this particular population strata. The purpose of this study was to validate a post-traumatic stress disorder (PTSD) scale from Colombia that has been used in people from cities with social violence, in two Mexican cities with the same problem of social violence. The sample included 792 participants, from the Mexican state of Chihuahua (Juarez and Chihuahua), with a mean age of 18.94 (*SD* = 1.51) years, aged 17 to 21. The sample was divided randomly into two subsamples to perform an exploratory factor analysis (EFA; n = 396), and a confirmatory factor analysis (CFA; n = 396). No statistically significant differences were found between both samples in socio-demographic variables. The scale had excellent internal reliability values. The items grouped in to five factors in the EFA, which were corroborated in the CFA, with acceptable factor loadings in both analyses. This PTSD scale has been validated using a Mexican sample and can be used to measure PTSD symptoms for research of clinical purposes in a Mexican population.

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Post-traumatic stress; victimization; adolescents; contextual violence

Introduction

The main purpose of this study was to validate a post-traumatic stress disorder (PTSD) self-report scale from Colombia (Pineda, Guerrero, Pinilla, & Estupiñán, 2002), which comprises five domains related to PTSD symptomatology, by evaluating its validity and reliability in a population from Mexico. This scale was designed to assess PTSD symptoms in people that experienced social violence caused by the guerrilla in San Joaquín Colombia, sharing similarities with the crisis in the state of Chihuahua due to the violence caused by the drug cartels.

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Violence in Mexico

Between 2008 and 2019, people in Mexico have experienced an inescapable climate of violence, uncertainty, fear, and unprecedented homicide rates, after a high exposure to social violence caused by a nation-wide war between drug cartels and also the Mexican government. Homicide statistics in Mexico indicate that 2018 was the year with the most homicides (38,964) ever reported in a year (Aguirre, 2019). In 2017, 29,168 homicides were reported, representing a 27% increase compared to 2016. Not only was there an increase in homicide rates, but also in other related crimes like extortions, kidnappings, and armed robbery.

Not all states in Mexico have high violence rates, like Yucatan, a southern Mexican state, which has the lowest homicide rate among all states, 1.79 homicides per 100,000 people, according to data reported by the Executive Department of the National System of Public Security (SESNP, 2018). In contrast, the state of Chihuahua has one of the highest homicide rates in the country, with 189 homicides per 100,000 people. The trend in homicide rates remained on the rise in the state of Chihuahua, 3.4 times the national rate, affecting mostly young people (United Nations International Children´s Emergency Fund [UNICEF], 2015).

Barraza and Almada (2012) found that more than 10,000 homicides, occurred in the city of Juarez from 2007 to 2012, becoming the most violent city in the world in 2010. People in the state of Chihuahua have been victims of extreme violence since 2008, when the war among drug cartels escalated, bringing problems concerning their mental health, including problems related to PTSD, specifically those that were witness to violent events (Chávez-Valdez & Ríos-Velasco, 2018; Esparza, Montañez, Carrillo, & Gutiérrez, 2018).

In 2012, 39.2% of Chihuahua's population was living in poverty (CONEVAL, 2014). Because of this crisis, Barraza and Almada (2012), indicated that the young population of Chihuahua were in a permanent risk and vulnerability, since the vast majority of murdered were young. Youth were experiencing an economic crisis, lack of opportunities, aggravated discrimination, loneliness, and stress, so for many of them organized crime became an option to survive in this world leading to all of these juvenile homicides. Youth that were not involved in criminal activities lived in fear developing symptoms of anxiety, depression and PTSD (Chávez-Valdez et al., 2018; Esparza et al., 2018). Young people became part of a circle of victimization and stigma. They were considered both victims and perpetrators (Morás, 2010). The consequences generated by the phenomenon of violence were multiple. These situations created an impact in the community and its culture, which led to symptoms of fear, anguish, sadness, uncertainty and hopelessness.

Mental health symptoms

Miranda, Moreno, Mera, and Palacios (2010) analyzed the crisis that emerged in the city of Chihuahua due to social violence, identifying that feelings of insecurity

promoted an increase in loneliness, pain, and difficulty to trust others, marring the structure of the social networks. The perception of the community was that police agencies (local, state, and national) were doing very little about the crimes committed and that they tried to minimize the socio-emotional consequences of the victims, creating a perceived culture of illegality, where people could commit crimes and not be caught (Miranda et al., 2010). All of these derived in perceived physical and emotional threats, cognitive and behavioral reactions, with implications in the well-being and quality of life for individuals.

The perception that the crime was out of control had a large effect in social interactions, by making people distrust of everyone else and to not interact with those who they did not know. Several people became victims of violence because they were near a person involved in drug dealing when they were shot or abducted. People in Chihuahua would not go out nor visit a place if they did not know everyone there and were sure that those people were not involved in drug dealing. In addition, the security industry grew, especially in higher socio-economic sectors, seeking a way to protect themselves, by transforming neighborhoods into gated communities with limited access to people. Having witnessed or having been exposed, either directly or indirectly, to a series of events with high traumatic content such as abductions, kidnappings, homicides, armed robberies, extortions, among others, people reported post-traumatic stress related symptoms.

Post-traumatic stress disorder and its measurement

The American Psychiatric Association (APA, 2013), in the latest version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), reconsidered the diagnostic criteria for post-traumatic stress disorder (PTSD) by reclassifying it as a "Trauma and Stress-Related Disorder". This disorder is caused by a traumatic event, stressor, and has symptoms of intrusions (e.g., flashbacks or nightmares), avoidance of trauma-related stimuli, negative alterations in cognitions and mood (e.g., inability for recall key features of the trauma or negative affect), and alterations in arousal and reactivity (e.g., aggression or hypervigilance; APA 2013).

Most people in Chihuahua witnessed homicides all over the state since they were occurring in schools, shopping centers, malls, churches, and in the morning, afternoon, or night. There were no safe areas in the cities since homicides could happen in any place at any time and even in the presence of police officers. People also were victims, directly or vicariously, of kidnappings, extortions, carjacking's, house jacking's, among other crimes, which led to the development of symptoms of PTSD in many of them (Chávez-Valdez et al., 2018; Esparza et al., 2018).

Pineda et al. (2002) developed a PTSD scale that was used in a Colombian population, San Joaquín, that experienced violence caused by guerrillas. The scale was based in the DSM-IV-TR (APA, 2013) diagnostic criteria for PTSD

and was composed of 24 items. The internal reliability of the scale had a Cronbach's alpha of .97. Pineda et al. (2002) did not perform exploratory or confirmatory factor analyses to validate the factor structure of the scale. Although, this measure is not intended to diagnose PTSD, since it could only be done with a clinical interview, the focus of this scale is to measure the symptoms of PTSD experienced by people that live in places with social violence. The purpose of this study is to validate this PTSD scale in a Mexican population from the state of Chihuahua, which has been experiencing violence similar to that of San Joaquin, Colombia. Psychometric properties were evaluated by analyzing internal reliabilities, exploratory factor analysis, and confirmatory factor analysis (McDonald, 1999) in a Mexican population.

Method

Participants

The scale was administered to 792 participants recruited from the cities of Juarez (n = 361) and Chihuahua (n = 431), both part of the Mexican state of Chihuahua. Participants were 56.6% female and 43.4% male, it comprises the 17–21 age group, with a mean age of 18.94 (SD = 1.51) years. With respect to job status, 71.7% did not have a job and 28.3% had a job. Demographic information for each city is provided in Table 1.

Instrument

Pineda et al. (2002) developed the PTSD scale for traumatic events. It is a 24-item scale with a four-point Likert-type response format based in the DSM-IV-TR diagnostic criteria for PTSD in a population, from San Joaquin, Colombia, that experienced violence from guerrillas. The PTSD scale has a good discriminant validity and good sensibility and specificity. The items had an excellent internal reliability, with a Cronbach's alpha of . 97.

Table 1. Demographic information for the total sample and each city.

	Total	Juarez	Chihuahua	t or X^2 (p)
N	792	361	431	
Mean Age (SD)	18.94 (1.51)	19.11 (1.48)	18.79 (1.52)	3.01 (.003)
Gender				
Female (%)	56.6	59.8	53.8	2.88
Male (%)	43.4	40.2	46.2	(.09)
Working Status				
Has a job (%)	28.3	33.8	23.7	9.34
Does not have a job (%)	71.7	66.2	76.3	(.002)

Procedure

Officials from the universities in Juarez and Chihuahua were contacted two months before the data collection process to obtain permission. After obtaining permission from one public university in Juarez, one public university in Chihuahua, and one private university in Chihuahua, participants were approached and invited to participate in the study. Informed consent was given to the students and all questions about the study were answered. The students sat individually to ensure anonymity of their answers, and they were instructed to not talk with others, ensuring confidentiality in their responses. The questionnaires were completed in a period of 30 to 50 minutes.

For the analysis, the sample was randomly divided into two subsamples. One of the subsamples was used to perform an exploratory factor analysis and the other subsample was used to perform a confirmatory factor analysis. In the first analysis, the items were analyzed with an exploratory factor analysis to find a factor structure that had a good fit with the theory. In the second analysis, the factor structure found in the first analysis was corroborated with a confirmatory factor analysis (CFA). According to Hu and Bentler (1999), they recommend the following cutoff points per index to evaluate the model fit of the proposed scale: GFI ≥ 0.90, NFI ≥ 0.90, CFI ≥ 0.90, and RMSEA ≤ .06. For the third analysis, the internal reliabilities of the factors and total scale score were analyzed with Cronbach´s alpha index.

Results

The sample was randomly divided into two samples to perform an exploratory factor analysis with one of the samples (n = 396), and to perform a confirmatory factor analysis with the second sample (n = 396). There were no statistically significant differences between both samples in the demographic information (see Table 1).

Exploratory factor analysis

The 24 items were analyzed with an exploratory factor analysis (EFA), using the generalized least squares method with a Promax rotation. The factor loadings for most of the items were the highest in the expected factors (see Table 2). The KMO index (Snedecor & Cochran, 1989) was 0.92 and the Bartlett's sphericity test (Snedecor & Cochran, 1989) indicated an adequate and normally distributed sample (p < .01) for the EFA. If the highest factor loading of an item was less than 0.30, the item was eliminated, and if an item had shared factor loadings in two or more factors (factor loadings difference less than 0.10), then the item was also removed.

The final scale had 23 items with unique factor loadings ranging from .44 to .85 (see Table 2). Only one item was excluded because of a low factor loading value (item 10). The factor structure of the scale reflected five the factors. Table 2 shows factor loadings and communalities for the exploratory factor analysis of the PTSD scale. The first factor explained 37.25% of the total variance, and it was composed of eight items (items 11a to 17) with factor loadings ranging from .72 to .81. According to the theme of these items, they belong to criterion D "negative alterations in cognitions and mood". An item from this factor is "After what happened, I feel that nothing matters to me". The second factor explained 10.42% of the total variance and it consisted of five items (items three to seven) with a range of factor loadings from .63 to 0.85. The theme for these items was related to criterion B "intrusion symptoms", and an item from this factor is "I constantly have thoughts that remind me of the unpleasant situation, and they cause me great anguish". The third factor explained 5.59% of the total variance and it included four items (items 20a to 20d) with factor loading values between .80 to 0.83. The theme for these items was related to criterion G "functional significance", and an item from this factor is "I have decreased almost all my social activities after what happened to me". The fourth factor, composed of four items, refers to criterion C "avoidance" Factor loading values ranged between .30 to .73. An example of an item is "I always avoid thinking or talking about what happened". The fifth factor had items 18 and 19, and they reflected criterion E "alterations in arousal and reactivity". The items from this factor are "Since I had that horrible situation, I always observe with suspicion everything that happens around me" (item loading = 0.76), and "After what happened to me, anything puts me on alert and scares me" (item loading = 0.75).

Confirmatory factor analysis

A sample of 396 participants was used to cross-validate the confirmatory factor structure of the PTSD measure. The confirmatory factor analysis included five factors with the corresponding items found in the exploratory factor analysis (see Table 3). In order to calculate the model, the variance of the item with the highest loading per factor had to be constrained to one. Goodness of fit indices for the model were evaluated obtaining the following results: The X^2 with 217 degrees freedom was equal to 490.47 ($p < .001$). The rest of the values were: GFI = .90, RMSEA = .056, CFI = .94, and NFI = .90. Using Hu and Bentler's (1999) criteria, all indices indicate a good model fit except for the X^2. Item loadings for this model ranged from .37 to .87 (see Table 3). The correlations among factors were analyzed (see Table 4). All of the correlations between factors were statistically significant ranging between r = .45 and r = .85.

Table 2. Factor loadings and communalities for the exploratory factor analysis of the PTSD scale.

	Factors					Communalities
Item (Spanish/English)	1	2	3	4	5	h^2
1. Últimamente he vivido al menos una situación relacionada con muertes o amenazas contra mi vida o la de otras personas relacionadas conmigo (Lately, I have experienced at least one situation related to deaths or threats against my life, or to other people close to me)	0.18	0.32	0.20	**0.44**	0.23	0.33
2. Por esta situación he experimentado mucha angustia o temor excesivo (Because of this situation, I have experienced a lot of anguish or excessive fear)	0.18	0.47	0.32	**0.64**	0.31	0.55
3. Constantemente tengo pensamientos que me recuerdan la situación desagradable y me provocan mucha angustia (I constantly have thoughts that remind me of the unpleasant situation, and they cause me great anguish)	0.24	**0.65**	0.25	0.55	0.37	0.59
4. Sueño mucho con lo que pasó (I dream a lot about what happened)	0.43	**0.85**	0.38	0.34	0.41	0.77
5. La mayor parte del tiempo creo estar viviendo lo sucedido (Most of the time I think I'm living what happened)	0.53	**0.83**	0.47	0.26	0.35	0.77
6. Cuando algo me recuerda la situación, me siento muy mal (When something reminds me of the situation, I feel very bad)	0.21	**0.63**	0.26	0.52	0.47	0.60
7. Cuando algo me recuerda un aspecto de la situación, mi cuerpo se altera (When something reminds me of an aspect of the situation, my body gets upset)	0.39	**0.66**	0.43	0.40	0.48	0.54
8. Siempre evito pensar o hablar de lo que pasó (I always avoid thinking or talking about what happened)	0.12	0.25	0.15	**0.54**	0.22	0.40
9. La mayoría de las veces evito cosas y sitios que me recuerden la situación (Most of the time I avoid the things and places that remind me of the situation)	0.16	0.25	0.14	**0.51**	0.26	0.39
10. Olvidé muchas cosas de la situación desagradable (I forgot many things about the unpleasant situation)	0.15	0.12	0.08	0.23	0.01	0.25
11a. A partir de lo que pasó, siento que nada me importa (After what happened, I feel that nothing matters to me)	**0.73**	0.40	0.51	0.25	0.31	0.67
11b. Después de la situación, tengo muchas dificultades para llevar a cabo las actividades que hacía antes (After the situation, I have many difficulties to carry out the activities I did before)	**0.74**	0.43	0.55	0.23	0.45	0.63
12. A partir de lo que pasó, las personas que me rodean ya no son importantes para mí (After what happened, the people around me are no longer important to me)	**0.81**	0.33	0.52	0.14	0.31	0.71
13. Después del suceso desagradable tengo muchas dificultades para querer como lo hacía antes (After the unpleasant event I have many difficulties to love as I did before)	**0.78**	0.43	0.58	0.24	0.38	0.67
14. A partir de lo que sucedió, siento que mi futuro es triste y desolador (After what happened, I feel that my future is sad and desolate)	**0.78**	0.38	0.52	0.07	0.37	0.66
15. Después del suceso desagradable, me es muy difícil conciliar el sueño (After the unpleasant event, it is very difficult for me to sleep)	**0.73**	0.50	0.55	0.11	0.41	0.61
16. Después de la situación que viví, siento que frecuentemente estoy de mal humor (After the situation that I experienced, I feel that I am frequently in a bad mood)	**0.75**	0.47	0.63	0.10	0.50	0.70

(*Continued*)

Table 2. (Continued).

Item (Spanish/English)	Factors					Communalities
	1	2	3	4	5	h^2
17. Me es muy difícil concentrarme en mis actividades, después de lo sucedido (It is very difficult for me to focus on my activities, after what happened)	**0.72**	0.49	0.62	0.14	0.55	0.67
18. Desde que tuve esa situación horrible, siempre observo con sospecha todo lo que ocurre a mi alrededor (Since I had that horrible situation, I always observe with suspicion everything that happens around me)	0.41	0.36	0.44	0.28	**0.77**	0.64
19. Desde lo que me pasó, cualquier cosa me pone en alerta y me asusta (After what happened to me, anything puts me on alert and scares me)	0.39	0.48	0.47	0.31	**0.85**	0.75
20a. Después de esa situación, la mayor parte del tiempo me siento mal, en todos los sentidos (After that situation, most of the time I feel bad, in every way)	0.56	0.47	**0.82**	0.11	0.49	0.73
20b. He disminuido casi todas mis actividades sociales después de lo que me pasó (I have decreased almost all my social activities after what happened to me)	0.57	0.37	**0.80**	0.27	0.46	0.69
20c. Después de lo sucedido, tengo muchas dificultades en mis relaciones con los demás (After what happened, I have many difficulties in my relationships with others)	0.60	0.40	**0.82**	0.16	0.47	0.72
20d. Después de lo que me pasó, he disminuido en gran medida mi ritmo de trabajo (After what happened to me, I have greatly diminished my work rate)	0.64	0.36	**0.83**	0.21	0.36	0.76

Highest factor loadings are in bolden font. Items without any factor ladings with bolden font were considered to have shared factor loadings.

Internal reliability

The internal reliabilities of each factor was calculated with the Cronbach's alpha index (α). Table 5. shows Cronbach's alpha values for each factor and total scale for the exploratory and confirmatory factor analyses. Most of the values have acceptable values except for factor 4, which has low values in both groups. Some shrinkage was observed upon cross-validation, as expected.

Discussion

The PTSD scale analyzed in this study, with undergraduate Mexican students, shows a five-factor structure that corresponds to the DSM-V diagnostic criteria for PTSD. The Exploratory factor analysis (EFA), indicated a five-factor solution: negative alterations in cognitions and mood (criterion D), intrusion symptoms (criterion B), functional significance (criterion G), avoidance (criterion C), and alterations in arousal and reactivity (criterion E). The confirmatory factor analysis corroborated the factor structure of the first analysis. The PTSD criteria in the DSM-V is reflected in the items of this scale, for example: numbing of general responsiveness after the trauma,

Table 3. Factor loadings, communalities, means, standard deviations and fit indices for the confirmatory factor analysis of the PTSD scale.

Items	Loadings	Mean (SD)	Model fit índices
Factor 1			
11[a]	0.65	2.04 (1.05)	
11b	0.77	2.05 (1.00)	$X^2(217) = 490.47$, $p < .001$
12	0.81	1.95 (.97)	GFI = .90
13	0.72	2.06 (1.04)	NFI = .90
14	0.80	1.99 (1.04)	CFI = .94
15	0.78	2.04 (1.00)	RMSEA = .056
16	0.74	2.20 (1.06)	
17	0.71	2.15 (1.01)	
Factor 2			
3	0.60	2.55 (.94)	
4	0.79	2.12 (1.00)	
5	0.80	2.08 (1.05)	
6	0.55	2.64 (.96)	
7	0.63	2.44 (1.01)	
Factor 3			
20[a]	0.79	2.07 (1.01)	
20b	0.82	2.08 (.99)	
20c	0.79	2.03 (.95)	
20d	0.76	1.85 (.94)	
Factor 4			
1	0.51	2.93 (1.00)	
2	0.73	2.63 (.91)	
8	0.30	2.45 (1.03)	
9	0.34	2.41 (1.02)	
Factor 5			
18	0.76	2.61 (.97)	
19	0.75	2.51 (.98)	

Table 4. Correlation between factors of the PTSD scale.

	F1	F2	F3	F4	F5
F1	-				
F2	0.69***	-			
F3	0.45***	0.58***	-		
F4	0.48***	0.54***	0.65***	-	
F5	0.45***	0.52***	0.85***	0.59***	-

*p < .001.

Table 5. Internal reliabilities, measured with Cronbach´s alpha, of each factor and total scale for the exploratory and confirmatory factor analyses.

	EFA	CFA
Factor 1	0.91	0.91
Factor 2	0.84	0.82
Factor 3	0.88	0.87
Factor 4	0.60	0.53
Factor 5	0.79	0.72
Total	0.92	0.92

EFA = Exploratory factor analysis; CFA = Confirmatory factor analysis

feeling of detachment from others, lack of concentration, irritability and outbursts of anger, difficulty falling or staying asleep and a recurrent sense of foreshortened future (APA, 2013).

In regards to the first factor, "negative alterations in cognitions and mood", Barraza and Almada (2012) mentioned that severe symptoms of depression and post-traumatic stress are a consequence of what was experienced or witnessed in Juarez city, "as they live in fear of being directly or indirectly victims of crime, the disorders of anxiety, and acute psychoaffective problems, not being cared for with priority, could generate more violence in the future "(p. 404). Several studies have shown a relationship between PTSD and depression, especially in those that have experienced social violence (Adams et al., 2018; Hoppen & Morina, 2019; Moring et al., 2019).

The second factor, "intrusion symptoms", refers to recurrent distressing thoughts of a traumatic event, such as intrusive recollections of images, thoughts, or perceptions as a sense of trauma reliving, also named as "flashbacks", the hallucinations and their impact in the mental suffering and somatization of a truly severe trauma. The consequences generated by the phenomenon of violence are multiple, these situations create an impact on the personal and cultural identity of a group or community, which gives rise to various behaviors and particular attitudinal reactions, as an adaptation to reality, in turn, generates reactions on an emotional level, such as fear, anguish, sadness, uncertainty and hopelessness.

The third factor, "functional significance", refers to dissociation, generalized discomfort, restlessness, low performance, related to "*generalized anxiety/social phobia*". Patients suffering posttraumatic stress disorder feel that the world is an unsafe place to live, feel on edge, and decrease activity on things they used to enjoy. In recent research, analyzing the crisis of violence in the city of Chihuahua, Miranda et al. (2010), identified that feelings of insecurity promoted an increase in loneliness, pain, and grew a serious difficulty to trust others, undermining the structure of the social networks. For Sullivan (as cited in Sanchez, 2002) different types of personalities, as well as the neurotic symptoms, are explained as a result of the combat against the anxiety that arises from the relations with others, acting as a security system that is maintained with the purpose of mitigating it. A neurotic collective personality could be conceived in violent environments (Sánchez, 2002).

The fourth factor, "avoidance" refers to persistent avoidance of stimuli associated with the trauma (not present before the trauma), indicated by efforts to avoid thoughts, feelings, conversations, activities, places, or people associated with the stressful trauma (APA, 2013). In our study the inability to recall important aspects of the trauma, seems to be an avoidant outcome promoted by extreme levels of anguish and fear. When avoidance reach high

levels, or when it is the main coping strategy, it interferes with their emotional recovery and healing.

The fifth factor, "alterations in arousal and reactivity", describes hypervigilance as an enhanced state of sensory sensitivity and exaggerated startle responses, such as body spasms, or eye blinking to unexpected or sudden noises, and other sensorial stimuli (APA, 2013).

We consider this tool necessary as a scientific approximation to the study of post-traumatic stress traits originated from having witnessed or having been exposured, either directly or indirectly, to a series of traumatic stressful events in violent cities, where it is common to be exposed to disappearances, kidnappings, homicides, sexual assaults, armed robbery, and extortion, among others. The scale presented analogies with the DSM-V criteria for PTSD, and it reported good psychometric properties for youths in contexts of social violence.

Limitations of this study include the convenience sample used for these analyses. The sample drawn from the cities of Chihuahua and Juarez was not randomly selected and this could limit the generalization of the results of this study for these cities. The state of Chihuahua was affected by social violence in its several cities and towns, but our study only included people from the two largest cities. The study should be replicated using samples from smaller towns to corroborate the factor structure found in this study, since there is a probability that the results could be different in smaller rural places. There is also a need to replicate this study in other states in Mexico that are also suffering social violence due to drug cartels to see if the factor structure of the scale is cross-validated there.

PTSD is a consequence of social violence that has been observed in people that live in the state of Chihuahua PTSD (Chávez-Valdez et al., 2018; Esparza et al., 2018). This scale is the first PTSD scale related to social violence that has been validated in Mexico. This PTSD scale has been validated in a Mexican population that has experienced social violence like Colombia more than 20 years ago. This scale will help researchers to better understand the role of PTSD as a consequence of social violence and how it could relate to other factors that could moderate the intensity of PTSD symptoms in people. This scale could also be used by mental health professionals to evaluate the levels of PTSD symptoms and to measure the evolution of patients that go to psychotherapy.

More exhaustive research in health and social psychology is necessary, also in applied sciences, such as neuroscience, to explain the neurological and social effects of contextual violence in individuals and in communities. It is essential to explain several particular symptoms, and social phenomena, such as neurotic personalities, social anxiety, social identity distortions, widespread or specific fear and particularly PTSD traits in young collectives exposed to high social violence. This research focused on developing a valid measure to study one of the psychological consequences that has been present because of social violence. There is a need to follow in this direction by starting to validate measures, that

have been used to study phenomena that are consequences of social violence, that have not been validated in Mexican samples.

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