

Measurement of Posttraumatic Stress Disorder (PTSD) in Mexican university students

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Original article

SUMMARY

Nowadays violence in different environments and contexts affects Mexico in a worrying manner. Common traumatic experiences in some communities may provoke serious mental health problems in individuals, such as posttraumatic stress disorder (PTSD). Having scales that measure events susceptible to become traumatic as well as posttraumatic symptomatology would allow for a prompt assessment before formal diagnosis, to be used mainly in epidemiological studies that enable detecting the impact of these occurrences in vulnerable people and communities. The objective of the present study was to build a scale of events and symptoms associated to PTSD in a population of Mexican students at university level, with the purpose of obtaining its reliability and validity.

A total of 858 students at four public universities, from Tejupilco, State of Mexico, Mexico, took part; the sample consists of 669 male and female young people between the ages of 18 and 25, who answered the scale in its entirety. The reliability index was obtained by means of Cronbach alpha and the validity of the construct through factor analysis.

The event most frequently reported was the experience of sudden death of some relative and/or a close friend. The scale as a screening instrument obtained indexes that proved to be convenient when applied to similar populations. The internal consistency indexes were $\alpha=.95$ and the factorial analysis yielded five factors with a total variance of 45.15%.

Its design allows for associating the symptoms of the previous year to a specific life event, valued by the same subject as susceptible to become traumatic. Thus, vulnerability to suffer PTSD or another sort of psychiatric disorder as a consequence of experienced events was identified among the young student population. Early detection could encourage the creation of general and specialized mental health services, accompanied by actions that recognize the value of university as one of the main social spaces for youths.

Key words: Measurement, mental health, PTSD, university students, trauma.

RESUMEN

Actualmente la violencia en diferentes ámbitos y contextos afecta de manera preocupante a México. Las experiencias traumáticas, comunes en algunas comunidades, pueden llegar a configurar problemas graves de salud mental en los individuos, entre ellos se cuenta el Trastorno por Estrés Postraumático (TEPT). El tener a la mano escalas que midan tanto los eventos susceptibles de ser traumáticos como la sintomatología postraumática, permitiría una evaluación rápida antes del diagnóstico formal y su utilización, principalmente en estudios epidemiológicos que permitan detectar el impacto de dichos sucesos en las personas y las comunidades. El objetivo del presente estudio consistió en la construcción de una escala de sucesos y síntomas asociados al TEPT en población mexicana universitaria, con el fin de obtener su confiabilidad y validez.

Participaron 858 estudiantes de cuatro universidades públicas de Tejupilco, Estado de México. La muestra fue de 669 jóvenes de ambos sexos con edades de 18 a 25 años, quienes contestaron la escala en su totalidad. El índice de confiabilidad se obtuvo con una alfa de Cronbach y la validez de constructo mediante el análisis factorial.

El suceso más frecuentemente encontrado fue la experiencia de muerte repentina de algún familiar y/o amigo cercano. La escala, como instrumento de tamizaje, obtuvo índices convenientes para ser aplicada en poblaciones similares. La consistencia interna resultó con una $\alpha=.95$ y el análisis factorial arrojó cinco factores con una varianza total de 45.15%.

Su diseño permite asociar los síntomas del último año a un suceso de vida específico, valorado por el mismo sujeto, como susceptible a ser traumático. Así, se detectó vulnerabilidad en la población juvenil estudiantil a padecer el TEPT o algún otro tipo de trastorno psiquiátrico derivado de los sucesos vividos.

La identificación precoz podría sugerir la creación de servicios generales y especializados en salud mental, acompañados de acciones que reconozcan el valor de la Universidad como uno de los principales espacios sociales para jóvenes.

Palabras clave: Medición, salud mental, TEPT, universitarios, trauma.

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INTRODUCTION

The presence of traumatic events in members of some communities, even if common, provokes subsequent reactions which, given the variability of the circumstances, would have an impact on the mental health of the individual.

There is not one single way to define an experience of this kind, due to its features; therefore, the way in which every individual experiences such an event, i.e., the particular relation established between them¹ must be taken into account.

Horowitz et al.,² based on the 1967 research of Holmes and Rahe regarding the human response to stress, considered some life events, from its assessment, as traumatic or prone to be.

Thus, in 1979 they designed the Impact of Event Scale (IES) with the purpose of assessing the subjective discomfort accompanying and following traumatic and/or stressing experiences. The instrument is constituted by two factors: intrusion and avoidance, whose frequency and intensity were measured by means of 15 items. The instrument was applied in two different samples and the reliability indexes were obtained by means of Cronbach alpha. Overall, in the first sample it gave .86; for the intrusion factor it was .78 and for the avoidance, .82. In the second sample, the overall result was .87, for the intrusion factor .89 and for the avoidance factor .79.

Given these figures, the instrument proved to be appropriate for the detection of the characteristic symptomatology of PTSD regarding the measurement of events susceptible to be experienced traumatically. In 1980, PTSD was first introduced in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) edited by the American Psychiatric Association (APA). The experience of traumatic events in war veterans and women who had suffered sexual abuse limited the groups of symptoms current today.³

Later editions have presented changes, especially those related with the conceptualization of the traumatic event. For the last revised version of the Manual, in 2005 (DSM-IV-TR), the criteria established for the diagnoses of PTSD were as follows:⁴

- A. The person has been exposed to a traumatic event in which both 1 and 2 have taken place:
 1. the person has experienced, witnessed or received an explanation related to one (or more) events characterized by death or threats to their physical integrity or those of others.
 2. the person has responded with intense fear, helplessness or horror.
- B. The characteristic symptom picture, secondary to the exposition to intense trauma, must include the presence of persistent *re-experiencing* of the traumatic event.
- C. Persistent *avoidance* of stimuli associated to it and numbing of the response capability of the individual.
- D. Persistent *arousal* symptoms.

For later versions, a reconsideration of some of these criteria has been proposed, especially those related to the event (A). The most common reasons report the ambiguity in conceptualization of the traumatic event regarding the different population groups (age, sex, race); regarding the cultural diversity having an influence on the subjective perception of the severity of the event to be considered as susceptible to be experienced in a traumatic manner, especially since this is a process that is subsequent to the physical occurrence of the stressing event.⁵⁻⁷

Time and intensity, as well as the individual and community characteristics of the subject are paramount for the development of such disorder. Demographic and socioeconomic factors are also related as risks of exposure to traumatic experiences and the subsequent PTSD, having thus an impact on the mental health of the individual.⁸

International mental health surveys witness to the existing prevalence, displaying symptomatology of PTSD and comorbidity into their societies. In the United States, through The National Comorbidity Survey Replication⁹ in 2007, a prevalence of life of PTSD 6.8% was observed in 5692 citizens 18 years or older and it was 3.5% during the last year of life. Thence, The National Survey of Adolescents, in 4023 adolescents, 3.7% was found in men and 6.3% in women for a prevalence of six months.

In the case of Colombian population, the general prevalence of PTSD in 2004, was 0.2%, while 1.8% suffered it at some point. For the population that was mobilized due to violent events, in 2008, it was found that 1.4% suffered symptoms of PTSD currently and 4.22% have presented them some time in their life. This allowed for observing that certain violent events such as threats, deaths or combats (either lived directly or indirectly) generate greater PTSD symptomatology.¹⁰

In Chile, during 2009, Pérez et al. found 4.4% prevalence in a nation-wide representative sample.¹¹ The authors underscored the importance of developing transcultural epidemiological studies of PTSD due to those differences found in countries that share the same origins, which are attributed to socio-economic factors such as the degree of inequality between the rich and the poor, violence, crime and poverty.

In 2005, a survey conducted in an urban area of Mexico underscored that 68% of its adult population had been exposed, at least once in their lifetime, to a stressing event associated to PTSD. The most frequent events were: prosecution or harassment, rape, kidnapping, sexual abuse and having been victims of violence from their parents. Regarding this disorder, the overall prevalence was 1.45%.¹²

Thus, the application of The Composite International Diagnostic Interview (CIDI) with adolescents, as implemented in the Metropolitan Area of Mexico City, obtained 68.9% life prevalence, for the PTSD section, who had experienced an associated traumatic event at least once. The most common

amongst them were: sudden, unexpected death of a family member, witnessing domestic violence and being involved in a serious accident.¹³ 28.2% of the adolescents mentioned they had experienced two or three traumatic events, while 13% reported four or more.

Such prevalence measurements have been obtained through semi-structured interviews; however, the screening instruments allow for a swift measurement prior to a formal diagnosis. They tend to be very useful for epidemiological studies or within vulnerable populations, varying in use according to the objectives and the population to be analyzed.¹⁴

However, in 2003,¹⁵ only six out of twenty five instruments were adapted and validated in Spanish. Also, the populations for which they had been validated were related to people with a specific event and/or who were under some treatment, either medical or psychological. Their application in different contexts is outside the purposes for which they were created. However, their structure displays reliability and validity indexes. Davidson's Trauma Scale (DTS) measures the severity and frequency of 17 symptoms in individuals who have experienced trauma. It holds an overall internal consistency of $\alpha=.99$. For the frequency subscale $\alpha=.97$ and for severity, $\alpha=.98$. Regarding its factorial structure, severity accounts for 24.79% of the total variance in subjects not suffering PTSD; in those showing PTSD, six factors appeared, with an explained variance of 26.91%. For frequency, the items included were intrusion, avoidance and numbing.¹⁶

The application of this instrument in a Spanish population had an overall internal consistency of $\alpha=.89$. Sub-scale for Cluster B (reexperiencing) $\alpha=.83$, cluster C (avoidance), $\alpha=.74$ and cluster D (hyperarousal), $\alpha=.76$. For this study, factor analysis was not followed and the population analyzed consisted of people with or without PTSD.¹⁷

On the other hand, the Impact of Event Scale (IES) is one of the instruments of self-inform most frequently used to assess the posttraumatic symptomatology in adults. Weiss et al. adapted this scale in 1996,¹⁸ considered the group of symptoms for hyperarousal (including anger and irritability), thus creating the 22 item Impact of Event Scale Revised (IES-R). In two samples of persons who were earthquake victims in the United States, reliability represented, for the first sample of 429 subjects, $\alpha=.87$ for intrusion, $\alpha=.85$ for avoidance and $\alpha=.79$ for hyperarousal. The second sample included 197 persons, with $\alpha=.91$ for intrusion, $\alpha=.84$ avoidance and $\alpha=.90$ hyperarousal.

In 2003 a meta-analysis was performed with 40 trials regarding the reliability and validity of IES, finding a mean of internal consistency for the intrusion factor of $\alpha=.86$ (.72-.92) and for the avoidance factor, $\alpha=.82$ (.65-.90). Final results suggest the presence of a third factor from the division of avoidance.¹⁹

Taking into account that in Mexico one out of every five individuals suffers at least one mental disorder in their life,

beginning at an age between 19 and 20 (with those related to anxiety being the most frequent and chronic),²⁰ thus the construction of a screening instrument was proposed to be applied on a population of university students in Mexico, with a design that would allow for the detection of life events specific to this community, as well as the current symptomatology associated to PTSD and other comorbid disorders, thus obtaining reliability and validity indexes pertinent to be used with similar populations.

MATERIALS AND METHODS

The participants in this trial were 858 young persons, male or female, enrolled at four different public universities in the city of Tejupilco, State of Mexico, with the previous authorization of the school authorities. The subjects agreed to answer the scale voluntarily and with informed consent.

The sample was non-probabilistic by convenience, made up of 669 (78%) students, male or female, ranging between 18 and 25 years of age, who chose the most shocking event when answering the list of events lived, considering that it still disturbed them, describing and answering fully the section about symptomatology with regards to such event.

The characteristics of the scale design were chosen from the revision of screening instruments for PTSD^{14,15,17} reconsidering the distribution of items by clusters according to the diagnostic criteria of DSM. However, the instrument was different at the end since the wording of the items was appropriate in context to the current conceptualization of PTSD and to a population of Mexican university students. This was considered by means of its revision by five Mexican experts on clinical and epidemiological trials related to this disorder. Moreover, a pilot application was carried out in order to improve the wording of items and to specify instructions, time used and the availability to be answered. An approved informed consent format was delivered by the Committee of Ethics and Research of the Center for Research in Medical Science at UAEMex (Autonomous University of the State of Mexico).

For the final application, the scale was integrated by two sections: the first is a list of 32 events which are regularly considered as traumatic, liable to generate PTSD symptoms. Two boxes were included to identify their occurrence: at some point in their lives and in the last twelve months. In the end, subjects chose the event in the list which had caused enough impact on their lives so as to remember it nowadays in the same way, considering it to be threatening to their personal integrity (criterion A). Later on they described it in general terms and pointed out the severity of the event as they perceived it ranging from 1 to 10.

The second section was made up by 65 items regarding re-experiencing, avoidance (detachment and emotional numbing) and hyperarousal, regarding criteria B, C and D

Table 1. Distribution of occurrence of events liable to be traumatic

	Traumatic event	Frequency	%
1	Sudden death of a family member or close friend	163	24.4
2	Accidents	112	16.7
3	Physical abuse	74	11.1
4	Threat and/or traumatic experience of others	66	9.9
5	Be threatened or felt watched	60	9.0
6	Be about to drown	51	7.6
7	Witness some human atrocity	47	7.0
8	Sexual abuse	33	4.9
9	Be in the midst of war	25	3.7
10	Hospitalization	14	2.1
11	Disasters (natural and/or human)	9	1.3
12	Have injured or killed somebody	7	1.0
13	Have suffered severe burns	5	.7
14	Have been hostage, kidnapped or tortured	2	.3
15	Have been a refugee in a different country	1	.1
	Total	669	100.0

of the same manual, in social, cognitive, physical and emotional manifestations. The frequency of those symptoms was limited for the last twelve months, from the previously described event, though occurred in previous years. The answers were set on a Likert type scale assigning 1 to never and 5 to everyday (appendix 1).

Descriptive statistics was used in order to obtain frequencies for: sex, age, major studies area, municipality of residence. Regarding the chosen event: kind of event (according to DSM-IV-TR) and age of occurrence. In order to consider an event as traumatic it was necessary to previously perform a qualitative analysis of the description generated by the subjects. The categories were as follows: description corresponding the chosen event; manifesting having felt their life or personal integrity or those of some close relation as threatened; specify the age at the occurrence and point out whether they have experienced the event, witnessed it or been told about it.

The reliability of the items was obtained through the internal consistency method for all items, with alpha Cronbach coefficient used per item to be assessed individually along determinate values.²¹

Regarding construct validity, it was obtained by means of factor analysis, extracting the main components and obtaining a total explained variance with varimax rotation. Also, the alpha value was obtained for each factor. Statistical processes were carried out with statistical package SPSS version 17.

RESULTS

Out of the 669 students who answered both sections of the Scale, 53% were women and 47% men. Age displayed a mean of 19.94, the most frequent range being 18 to 20 years

Table 2. Factor load by item in the conformation of factors

Factor	Items	Factor load	
I	13	.584	
	16	.620	
	17	.600	
	20	.623	
	29	.450	
	31	.738	
	32	.663	
	35	.455	
	41	.664	
	42	.558	
	45	.546	
	46	.640	
	47	.423	
	50	.598	
	51	.629	
II	58	.713	
	64	.568	
	65	.600	
	25	.496	
	26	.420	
	36	.405	
	38	.562	
	40	.463	
	43	.474	
	49	.465	
	52	.567	
	53	.658	
	54	.572	
	55	.601	
	56	.522	
III	57	.528	
	59	.654	
	60	.418	
	61	.502	
	62	.454	
	4	.542	
	5	.581	
	8	.580	
	10	.525	
	22	.486	
	24	.420	
	28	.515	
	30	.481	
	33	.633	
	34	.603	
IV	37	.592	
	48	.563	
	14	.470	
	15	.482	
	18	.539	
	23	.525	
	44	.437	
	V	1	.634
		2	.518
		3	.528
		7	.501
		27	.418
		63	.462
		Eliminated items	6, 9, 11, 12, 19, 21 y 39

of age. The areas of knowledge regarding their major were: economy-administration (47%), social sciences and humanities (35%) y physics/mathematics (18%).

Regarding their place of residence, 53% declared they lived in the municipality of Tejupilco, followed by nearby municipalities of Amatepec y Luvianos with 7% each. The remaining 33% declared they lived in different municipalities in the State of Mexico and, in a lesser percentage, in the States of Michoacan, Oaxaca and the Federal District.

Table 1 shows the distribution of occurrence of events considered as likely to be traumatic in the sample. The 32 events were grouped in 15 regarding the similarity of the characteristics described.

Regarding the age of occurrence, the mean was 17.59 years. 60% declared having experienced it between 15 and 19 years of age. 26%, between 4 and 12; and 14%, between 20 and 25. Regarding the kind of event, 73.1% experienced the event directly, 17% witnessed it and 9.9% was told about it. The perceived severity showed a mean of 6.95, 10 being the most frequent score.

Reliability was obtained by means of a dependability analysis with internal consistency method, performing correlation between items, with an overall Cronbach alpha of .96 for all 65 items.

Construct validity was performed by means of the factor analysis method with Kaiser varimax rotation for matrix solution obtaining 13 factors. Due to grouping of items, factor analysis was performed anew for five factors, the majority of them were considered to be there. Thus factor load of 58 items with values higher than .40 was obtained according to extraction method, being grouped with the where they scored the highest (table 2).

These five factors allowed for characterizing the PTSD symptomatology in the sample according to diagnostic criteria: emotional numbing avoidance (18), physiological re-experiencing (17), detachment avoidance (12), hyperarousal (5) y cognitive re-experiencing (6). Factor overall explained variance of 45.15% (table 3).

Later, the overall internal consistency of the 58 items was obtained, with an alpha result of .957; by factor, the scores obtained were higher than .70 (table 4).

Table 3. Factor analysis of the scale for posttraumatic stress disorder in Mexican university students

Factor	Name	Eigen value	Variance	Variance accumulated
I	Emotional numbing avoidance	8.618	13.258	13.258
II	Physiological re-experiencing	6.961	10.709	23.968
III	Detachment avoidance	6.600	10.154	34.121
IV	Hyperarousal	3.667	5.641	39.763
V	Cognitive re-experiencing	3.502	5.388	45.150

Table 4. Internal factor consistency obtained in the scale for posttraumatic stress disorder in Mexican university students

Factor	Cronbach Alpha	Number of elements	Mean	Typical deviation
I	.919	18	25.06	9.527
II	.911	17	24.62	8.932
III	.864	12	22.33	8.783
IV	.705	5	6.36	2.206
V	.769	6	10.13	3.663
General	.957	58	88.51	27.820

DISCUSSION

The prevalence of traumatic events associated to PTSD, considered as shocking to their physical and emotional integrity in this population (78%), was higher than that reported by Medina-Mora et al.¹² in an urban population during 2005 (68%). In both, the most prevailing event was experiencing the sudden death of some member of the family and/or close friend, in the sample, 24.4%. The remaining of the percentage was identified as events coincident with the reports of Orozco et al. in 2008¹³ in an adolescent population: high rate of accidents of different kinds and physical abuse (including domestic violence). The young students that make up the population included in this trial, was exposed since childhood and adolescence in most of the cases, to acts of violence in its various manifestations,²² sensing them as threatening to the integrity and continuity of their life.

As for the symptomatology of PTSD, the scale holds psychometric properties of a screening instrument with reliability and validity indexes which are convenient to be applied in similar populations, offering timely detection and specialized attention subsequent to any mental disorder associated to these events.

Reliability showed high consistency in its items with an alpha of .95, higher to that one of a population of 172 university students in Spain, in which DTS¹⁶ was applied and whose overall internal consistency was $\alpha=.89$. It was also higher than the overall mean $\alpha=.86$ reported in one metanalysis of 40 trials of IES¹⁹ and $\alpha=.87$ for IES-R,¹⁸ in a sample of 429 persons. It was also closer to the one obtained in the PTSD Severity of Symptoms Scale in 638 Spanish young adults, $\alpha=.92$.²³

Also, construct validity showed evidence that the advantages of design and construction of the scale in university students, allowing for the association of symptoms to a specific event in the assessment of the subject immerse in a context of social situations of violence. The Southern region of the State of Mexico neighbors the States of Guerrero, Michoacan and Morelos, the ones with the highest crime rate with severe affectation;²⁴ the events they share generate a sense of insecurity in people due to previous events such as family and personal victimization, violent crimes and crimes on property in the locality.²⁵ Also, Tejupilco has been site of struggle between cartels for the control of ar-

eas where synthetic drugs are produced and the racking of chemical precursors.²⁶

The demographic dynamics is conducive to the emigration of borderline communities in the States of Michoacan, Morelos, Guerrero and Mexico towards cities like Tejupilco, provoking a greater social pressure for the demand of jobs, education and health services.

Factor analysis represented a total explained variance of 45.15%. Considering .70 as the limit scoring for the test to be considered as reliable,²⁷ their extraction allowed for their enunciation from the group of symptoms referred by DSM-IV-TR.⁴

Difference may be due to the size of the sample and to the number of items, since the greater they are, the closer to 1 the reliability estimates shall be.²¹ Also, considerations vary for the event liable to be experienced. It was considered pertinent to characterize this trial specifying its kind, occurrence and subjective assessment, seeing that PTSD today is an anxiety disorder with more complex clinical manifestations.

The first factor to be obtained was identified as "Emotional numbing avoidance", a factor of the group of avoidance symptoms specified in IES.¹⁹ For both scales, items are clearly differentiated from those related to detachment avoidance.

Opposed to that, in IES-R,²⁸ validated in Spanish with 1078 young adults in Spain who did not report having lived any traumatic situation, two isolated factors were identified: intrusion/hyperarousal and avoidance, with no chance to divide the latter into two factors: numbing and isolating.

This group of distinct symptoms of Posttraumatic Stress has been referred to by Foa et al.,²⁹ who underscore that it has a relation with the life prevalence of the event. Students showed the presence of this symptomatology during the last year, but related with the experiencing of an event lived some time in their life, thus ascertaining the vulnerability of this population to develop some PTSD. Also, disadaptive coping by the subject may lead him to dysfunctional behavior at facing subsequent threats,³⁰ thus having an impact in their overall social relations.

Its use may be spread, since PTSE is not exclusive to experiencing traumatic events; major depression and dysthymic disorder are only some of the ailments most frequently associated with this disorder.³¹ There is a possibility of increasing its usefulness by designing other similar items in future applications, especially regarding hyperarousal and re-experiencing factors of a cognitive nature where the lowest alpha values were found.

According to the National Psychiatric Epidemiology Survey, in 2003, in Mexico,²⁰ only one out of every 10 subjects with some mental disorder received primary care, whereas only two out of 30 subjects with two or more mental disorders received specialized care. Furthermore, one out of five persons presented at least one type of mental disorder at some point in their life.

Moreover, as stated in the agenda for DSM-5, the study of such a disorder presents significant challenges due to the marked predominance of a western pattern, and consequently, a cultural diagnostic view is suggested in the following edition.³² Age-group, cultural diversity, and the presence of symptoms from the event occurred to many of the participants in this study many years before, underscores the need to consider the diagnostic criteria for PTSD.⁵⁻⁷

Thence the scale represents a measurement of mental health in Mexico according to a context of Mexican young persons who are immerse in an environment characterized by the increase of poverty and the distancing between economical and cultural possibilities of the different social groups where social violence can increase.³³

Institutions for Higher Education in Mexican cities constitute a space when facing this reality, offering quality service for the formation of the young with humanistic and cultural elements so that once they graduate they can contribute to the development of the country with the perspective of a global, harmonious and sympathetic society.³⁴

Attaining this goal may be challenging, but studies such as this one may be of help through the identification of those factors involved in the mental health of the young, foreseeing future interventions which might also include biological, cognitive, behavioral as well as social factors.

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APPENDIX 1**AUTONOMOUS UNIVERSITY OF THE STATE OF MÉXICO**
Center for the Research in Medical Sciences**Scale for Post-traumatic Stress in Mexican University Students**

The purpose of this questionnaire is the detection of events and of the characteristics of one of them that has been dangerous for your stability or the stability of someone close to you, as well as your reactions to such event during the last year. Your participation is very important since it will contribute to the latter development of strategies which are focused on promoting good health. **All information shall be confidential**, so please be as sincere as possible.

Date of Birth: _____ Age: _____ Today's date: _____

Gender: Female Male Place of residence: _____

Major Studies: _____ Level: _____

In the following list of events, mark with an "X" the box representing your situation, specifying *your age* when it happened. If it has happened *during the last year*, mark it also in the box in front of it.

Number	Events	At some point			Last twelve months	
		No	Yes	Age	No	Yes
1	Have been present in a natural disaster such as a tornado, earthquake or flood					
2	Have been involved in a disaster caused by humans					
3	Have suffered a disease which caused you serious injury or even death					
4	Have been robbed or threatened with a weapon					
5	Have been followed or felt watched in order to cause you harm					
6	Have been exposed to toxic or to dangerous chemical substance which may cause you great harm or death					
7	Have been involved in a motor vehicle accident which may have caused you death or serious injuries					
8	Have suffered some other kind of accident which might have caused you death or serious damage even while at school or at work					
9	Have been about to drown					
10	Have suffered serious burns					
11	Have been beaten by someone in your family (does not include couple or former couple)					
12	Have been beaten by couple or former couple					
13	Have been beaten by someone else					
14	Have been wounded, cut, scratched or have bled because of one parent or close relation					
15	Have been forced to have sexual intercourse with someone against your will					
16	Have been forced to touch someone's genitals or has someone touched your genitals against your will, or have been sexually molested against your will or inappropriately					
17	Have participated in war as a member of the army or of some non military organization					
18	Have been kidnapped					
19	Have been a member of the Peace Corps, or a humanitarian ambassador in a war zone or at some place where the population was subjected to terror, due to political, racial or religious conflict or any other kind of conflict					
20	Have been tortured					
21	Have been in a place where there was war, a revolt, a military coup d'état, or an invasion, as an unarmed civilian					
22	Have lived as a civilian in a place where the population lived in terror due to political, racial or religious reasons or any other reason					
23	The sudden or unexpected death of a family member or a very close friend (for example, in an accident, by assassination, suicide or due to a heart attack at an early age)					

Number	Events	At some point			Last twelve months	
		No	Yes	Age	No	yes
24	Have done something which accidentally caused serious wounds to a person or his or her death					
25	Have seriously wounded, tortured or killed someone, on purpose					
26	Have lived in exile (have to leave your country of origin and to seek refuge abroad to escape danger or execution)					
27	Have witnessed beatings among close family members					
28	Have heard of or seen someone being seriously wounded or being killed, or unexpectedly have seen a dead body					
29	Have been witness to atrocities or killings, for example, mutilations or mass murders					
30	Serious threat or harm to a family member or a close friend					
31	Traumatic experience of a family member or close friend such as kidnapping, rape or torture					
32	Are there any other situations which could have caused you death or serious injuries which is not on this list? Please specify:					

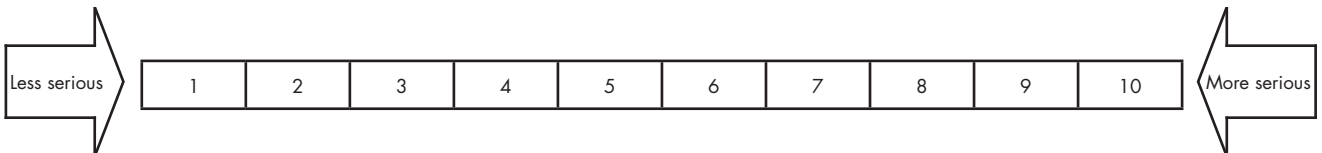
Pick the **event** which you consider to be the most striking, which even after being finished, it affected your welfare and safety enough as to talk about it. Write the number it refers to.

- a) Number of event _____
- b) What happened? _____

- c) How old were you? _____
- d) When? _____

- e) Where? _____
- f) With whom (family, friends, etc.) ? _____
- g) Were there any mortal victims? _____

How would you describe the severity of what happened? **Draw a circle** around the number you consider representative.



Regarding the event **previously described** answer whether or not, during the **last year**, have you experienced any of the following *sensations, emotions, thoughts and/or behaviors*. Mark with an "X" the box in the right using the following options for an answer.

Never 1	Sometimes 2	Several times a month 3	Several times a week 4	Everyday 5
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During the last **twelve months**, how frequently have you dealt with...

Number	Reactions	Frequency				
		1	2	3	4	5
1	Having nightmares					
2	Unpleasant thoughts					
3	Feeling physically worn out when thinking about it					
4	Avoid remembering it					
5	Getting away from people who remind me of it					
6	Exaggerate checking people I met recently					
7	Difficulty concentrating in school activities					
8	Getting easily angry					
9	Act without thinking because I easily get scared					
10	Fear that it will happen again					
11	Feeling stomachaches or diarrhea when I sense images of what happened					
12	Finding objects that are related					
13	Feeling isolated from the rest of the people					
14	Not attending those celebrations that remind me of it					
15	Feeling sick when my friends want to do related activities					
16	Believing that the future has nothing good in stock for me					
17	Difficulty to feel affection towards others					
18	Tremors, dizziness and or nausea at remembering it.					
19	Perceive hopelessly the events happening around me					
20	Stop caring about getting a passing grade at school					
21	Feeling emotions quickly					
22	Divert from conversations related to it					
23	Sweating excessively at remembering it					
24	Feel restless when hearing any familiar noise					
25	Feeling the same emotions as when it happened					
26	Living identical situations					
27	Difficulty sleeping					
28	Make an effort not to remember it during social events					
29	Try not to make any new friendships					
30	Getting immediately away from similar places					
31	Believing that the future paths of my life are not important					
32	Losing interest in school activities					
33	Making an effort to pretend it never happened					
34	Being alert immediately when facing a similar situation					
35	Getting upset easily					
36	Having faster heartbeats when I think of what happened					
37	Trying to get rid of my memories					
38	Wake up frightened after dreaming it happens again					
39	Stop going to school because I was thinking about it					
40	Wake up tired because of remembering it					

Measurement of Posttraumatic Stress Disorder (PTSD) in Mexican university students

Regarding the event **previously described** answer whether or not, during the **last year**, have you experienced any of the following *sensations, emotions, thoughts and/or behaviors*. Mark with an "X" the box in the right using the following options for an answer.

Never 1	Sometimes 2	Several times a month 3	Several times a week 4	Everyday 5
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During the last **twelve months**, how frequently have you dealt with...

Number	Reactions	Frequency				
		1	2	3	4	5
41	Believing it is better to stay away from others					
42	Prevent that others grow fond of me					
43	Sensing images from what happened					
44	Not being able to think about it because it gives me a headache					
45	Not expecting to have a steady job in the future					
46	Stop enjoying activities					
47	Sensitivity to what happens around me					
48	Trying not to feel anything when people talk about it					
49	Avoid going out of the house out of fear of it happening again					
50	Feeling lonely					
51	Stop being able to distinguish between feelings of joy or sadness, as if you were indifferent to what happens around					
52	Getting sick due to the excessive fear it causes me					
53	Feeling it will happen again any time					
54	Thinking about it even when I am with people who love me					
55	Feeling as if I were living it again					
56	Not being able to remember specific aspects					
57	Having unpleasant body sensations when I see something similar					
58	Stop caring about having friends					
59	Having dreams related to it					
60	Not expressing again the feelings I had when it happened					
61	Responding quickly to the aggressions of others					
62	Not being able to sleep due to feeling startled					
63	Being distracted in class because I start thinking of what happened					
64	Feeling unable to start a family					
65	Avoid having best friends					

Thank you for your help

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