Propiedades psicométricas de la Escala de Desensibilización a la Violencia para Adolescentes

Psychometric properties of the Desensitization to Violence Scale for Adolescents

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Palabras clave: habituación; juventud; psicometría; psicología social; violencia
Keywords: habituation; youth; psychometrics; social psychology; violence

Resumen

Introducción: La desensibilización a la violencia deviene de la exposición a la violencia. Reduce las emociones negativas en las respuestas cognitivas y fisiológicas hacia la violencia, incluso puede generar reacciones positivas ante ella.

Método. Se empleó un método secuencial derivativo para finalmente realizar un diseño analítico transaccional para el análisis factorial exploratorio y confirmatorio, además se realizó una aplicación para obtener validez de criterio (convergente) con una muestra distinta. Se contó con 1720 participantes de 25 instituciones de educación superior distintas y un centro de internamiento juvenil.

Resultados. El análisis factorial exploratorio muestra una varianza acumulada del 52% y un GFI de .98 con tres factores: sensibilidad hacia la violencia, entretenimiento con violencia física y agrado hacia la violencia psicológica. El análisis factorial confirmatorio presentó una varianza extraída superior a .50 y las propiedades psicométricas ideales en cada elemento del modelo en cada medida (CFI, AGFI, RMSEA, SRMR y ECVI). Los factores que permanecieron son aquellos relacionados con la diversión y entretenimiento con la violencia. Los cual indica que la desensibilización a la violencia no solo se relaciona con la normalización y legitimación de la violencia sino con el incremento de la realización y el agrado hacia ella.

Discusión o Conclusión: La escala de desensibilización a la violencia para adolescentes tiene adecuadas propiedades psicométricas y puede ser un instrumento valioso para generar campañas de intervención o prevención, especialmente por su íntima relación con altos puntajes en las personas internadas a consecuencia de comportamiento criminal.

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Abstract

Introduction: Desensitization to violence is the result of exposure to violence. It reduces the negative emotions in cognitive and physiological responses to violence and can even generate a positive response to it.

Method: A mixed sequential method yielding a transactional analytic design for Exploratory Factor Analysis and Confirmatory Factor Analysis with a sample of 1720 participants of 25 different high schools and a juvenile detention center. Followed by convergent validity (as a criterion validity) with a different sample.

Results: The EFA’s cumulative explained variance was 52% with a GFI of .98 with a three-factor model: sensitivity to violence, amusement with physical violence, and enjoyment of psychological violence. The CFA showed scores above .50 in Average Explained Variance in every factor, and an ideal model fit in every measure (CFI, AGFI, RMSEA, SRMR, and ECVI). The remaining factors are only those related with enjoying or amusement with violent behavior, indicating that the desensitization to violence is related not only with the normalization and legitimation of violence, but the increasing of the performance and amusement of it.

Discussion or Conclusion: The scale of desensitization to violence for adolescents has adequate psychometric properties and can be a valuable instrument to generate intervention or prevention programs, especially for its intimate relationship with high scores in people interned because of their criminal behavior.

Introduction

Exposure to violence in Mexico has reached record levels. The Mexican National Institute of Statistics and Geography (INEGI, Instituto Nacional de Estadística y Geografía, 2015) reported at least one victim of violence in 33.2% of households in the country, and 92.8% of all crimes are not reported. Mexico occupied the 144th place out of 163 countries in the 2015 Global Peace Index and recently ranked up to 140th (Institute for Economics and Peace, 2015, 2018a). However, the economic impact of violence in Mexico represented 21% of the GDP in 2017 (Institute for Economics and Peace, 2018b). INEGI (2015) also reported that there are 25,873 crime victims per each 100,000 people only in the state of San Luis Potosi. Every crime involves an act of violence, whether psychological, sexual, or physical. In the literature, exposure to
violence and its desensitization are usually evaluated through indirect measures, but, to the best of our knowledge, no direct measures are reported in the literature. A theoretical framework and the development of a measure of desensitization to violence can lead to a better understanding of youth perception towards violence and its consequences.

Violence is an act that limits and breaks apart people's wills by causing physical or psychological harm. It operates in accordance with the historical moment and context, depends on the values of the society in which it takes place, and is not always obvious. Violence can be lived or witnessed, also, it can happen in different contexts such as social, couple, family, school, community, and home among others (Barrios & Paravic, 2009; Cuevas & Castro, 2009; Salazar, 2011; World Health Organization, 2014).

Cooley-Strickland, Quille, Griffin, Stuart, Bradshaw and Furr-Holden (2011) propose that living in violent communities is harmful, especially for children and adolescents. Furthermore, the victims of indirect violence are more numerous than those of direct violence, and chronic community violence affects its members in the long term.

Given that social learning theory considers that people's beliefs and perceptions are affected by the environment, it was used in this study to address the phenomenon of desensitization to violence. The direct or indirect experience of social interaction can generate behavior models, actions that become learning standards and frame the events experienced by people and interpreted by social labeling. This process depends on the frequency with which an event occurs (e.g., violence) and the ideas about the event that could later become an accepted social model, or even a normative belief. Likewise, according to social learning, desensitization to violence is partly the result of a normative belief that allows for the exercise of violence without acknowledgment as such (Akers, 2009; Bandura, 1971, 1973; Ghiso, 2012; Huesmann & Guerra, 1997). According to Akers and Jennings (2016), criminal and violent behavior is learned as a communication process, mainly among people that are in the immediate context. Learning includes techniques with specific motives, goals, attitudes and rationalizations. A person commits a crime of violence because his ideas in favor overcome those that are against.

The aim of this paper is to report the psychometric properties of a desensitization to violence scale for adolescents. Our hypothesis was that the Desensitization to Violence Scale is reliable and valid. For that purpose content, construct (exploratory and confirmatory factor analysis) and criteria validity were evaluated.
Desensitization to violence

Wolpe (1971) proposed a desensitization technique aimed at the reduction of phobic reactions, among other emotional responses; however, the main concepts in the present investigation on desensitization to violence derive from a different construct. In this study, our perspective on the attribute of desensitization is closer to the one espoused by Funk, Baldacci, Pasold and Baumgardner (2004). These authors suggest that desensitization to violence originates from a constant exposure to violence, which in turn creates emotional desensitization through diminished emotional responses. Constant exposure also creates cognitive desensitization by highlighting the idea that violence is inevitable and mundane. These two, emotional and cognitive desensitization, decrease the possibility to censor violence.

Galan and Preciado (2014) summarize the construct of desensitization to violence follows:

Desensitization to violence is a process that occurs as a result of the exposure to violence either in the media or in real life. Furthermore, the phenomenon can be recognized in the reduction of physiological, emotional, cognitive or psychological responses, as well as the perception of, or attention given to violent acts that were experienced or witnessed. In conclusion, desensitization to violence seems to produce the belief that violence is trivial and inevitable, even capable of generating positive emotions (p. 70).

Recently, Galán and Sánchez-Armáss (2018) found a significant correlation between desensitization to violence and age, and a medium to high effect size in contrast to groups of mature and older adults. They found more desensitization in a city with greater violence index. Alimardani, Ardekani and Astany (2014) reviewed the concept of desensitization to violence and related it to media and neighborhoods; they report that being part of a violent environment results in desensitization to violence due to exposure. Diaz, Rivera and Reyes (2012) performed studies about anxiety with inhabitants of the crime-ridden city of Ciudad Juárez, Mexico. They claim that six months after violence started in the city there was a significant increase in the population’s anxiety levels; after two years, the difference had disappeared and people had grown accustomed to violence.

Krahe, Möller, Kirwil, Huesmann, Felber and Berger (2011) address the issue of desensitization to violence as result of interaction with the media. They found that desensitization
increases the interest for violent scenarios. They relate desensitization with difficulty to recognize violent lexicon, and the relation was associated with normative beliefs about violence. Mrug and Windle (2010) had previously pointed out the presence of cognitive schemata related with aggression and decreased empathy. Building on these findings, Galán (2018) studied violence exposure and desensitization discourse. Results suggested that amusement towards violence was an identifying characteristic of those who did not recognize and were unable to label violence in their daily lives. Mrug, Madan, Cook and Wright (2014) compare the effects of media violence and real-life violence on emotional and physiological desensitization. Studying a community sample of youths, they found that elevated levels of real life violence have more prominent effects on adolescents’ emotions than media violence, with outcomes including decreased empathy and trauma symptoms. On the other hand, limited exposure to violence could result in higher empathy and decreases distress from repeated scenes of violence.

**Instruments measuring similar constructs of desensitization to violence**

Megías, Romero-Sanchez, Duran, Moya and Bohner (2013) developed a scale of acceptance to modern myths about sexual aggression. Their instrument has 30 items, and it covers myths related to sexual violence. It focuses on cognitions about social interaction, sexual harassment, rape, and sexual interaction. However, its psychometric properties were found to be unclear.

Corey (2009) presented the Violence Sensitivity Scale (VSS) as a dissertation at the University of Rhode Island. A sample of 169 participants simultaneously completed the Nonviolence Test (NVT). To validate the VSS, Corey used the Attitudes Toward Violence Scale (ATVS) and the Marlowe-Crowne Social Desirability Scale (MCSD). The VSS measures exposure to violence, attitudes, social desirability, and non-violence. The author addresses the concept of desensitization to violence, which is similar to our construct. He made a principal components factor analysis, in which nonviolence and social desirability were found to predict sensitivity to violence. Corey’s instrument presented a low total variance explained and the sample population to validate the scale could be considered insufficient, according to Nunally (1979) and DeVellis (2012). Moreover, it should be pointed that the only source in which his scale can be found is in his doctoral thesis, not in a peer-reviewed article.

Galdames and Aron (2007) carried out similar research presenting a scale that measures violence legitimizing beliefs. The authors conducted their study using a representative sample
(sample a) which was compared with a group of children (sample b) identified as exposed to violence. They found five factors: legitimacy as fair defense, as a parenting strategy, to control the partner, to resolve conflicts, and as difficulties controlling emotions. The scale has 33 Likert-type items, grouped into four subscales, which refer to physical violence among peers (boys), physical violence among peers (girls), parent-child physical violence, and physical and verbal violence in the couple (parents). It has a Cronbach's alpha of 0.86, and uses a sample of 608 participants and Varimax rotation, which explained only 34.7% of total variance.

What follows is a review of the most recent studies found reporting desensitization to violence measures. Tarabah, Kurdahi, Usta and Doyle (2015) used the Media Preference survey for exposure to violence, and the KID-SAVE survey and Attitudes Toward Violence Scale Child Version to assess desensitization to violence. Dushyant and Wiesner (2015) used the Youth Risk Behavior Surveillance Survey to measure exposure to violence, including six adapted items from the Major Depressive Disorder Subscale of the Diagnostic Interview Schedule for Children to evaluate depressive symptoms. Other researchers have different measured psychological aspects with different instruments, for instance, witnessing community violence, depressive symptoms, and anxiety symptoms (Gaylord-Harden, Dickson, & Pierre, 2015). Using the Child Behavior Checklist, Fleckman, Drury, Taylor and Theall (2016) studied externalizing behaviors, and they used the Conflict Tactic Scale to assess direct and indirect exposure to violence. Read, Ballard, Emery and Bazzini (2016) examined arousal and desensitization to violence as a result of playing violent videogames by assessing progressive muscle relaxation and facial electromyography data, among other factors, and they also used the Self-Assessment Manikin, the Game Experience Questionnaire, and the Demographics and Exposure Questionnaire as self-reported input for their study.

Regarding studies on media and desensitization, we reviewed a paper by Funk (2015) describing physical and psychological measures of desensitization to violence, but none of them used a direct approach to measure the phenomenon. To the best of our knowledge, there is no instrument to date to directly measure desensitization to violence, and the existing instruments fail to address more than one of the several components or factors explained by our instrument, which makes our contribution relevant and innovative.
Method
A mixed sequential method yielding a transactional analytic design for Exploratory Factor Analysis and Confirmatory Factor Analysis. Followed by a criterion validity.

Participants
Main Sample. Sampling was conducted in three stages: First, 25 schools were randomly selected from a total of 148 listed in the cities of San Luis Potosi and Soledad de Graciano Sanchez. Secondly, classrooms were used as clusters, considering the possibilities, timing, and logistics that each institution considered pertinent. Finally, we also recruited adolescent volunteers at the local Juvenile Detention Center.

The initial number of participants was 1988. We discarded participants with large unanswered sections, those that clearly responded without reading, and those outside the age range of 15 to 18. The final sample consisted of 1720 participants, 869 (50.5%) females and 851 (49.5%) males. A total of 633 (36.8%) participants were 15 years old, 467 (27.2%) were 16 years old, 466 (27.1%) were 17 years old and 154 (9%) were 18 years old. Regarding their high school year, 861 (50.1%) were in the first year, 447 (27%) on the second year, and 396 (23%) were in the third year. At the time of the study, there were 19 inmate adolescents at the Juvenile Detention Center. Sixteen volunteered to participate in the study, comprising 0.9% of the total final sample.

Some urban areas in both cities are classified as “polygons of violence”, i.e., territorial units that are selected based on their criminal characteristics. Thirty nine point four percent of the sample (n=677) lived inside one of these violence polygons, 716 (41.6%) lived in an adjacent area, and 290 (16.9%) lived away from a polygon of violence. The majority of the sample (74%) reported living with both of parents, and 62% declared practicing a sport. Only 39% of subjects reported participating in artistic activities, and quite unexpectedly, only 33% reported suffering from economic deprivation, despite the fact that scarce economic resources characterize sampled neighborhoods.

Secondary Sample. A convenience sample of 300 adults volunteers was recruited to evaluate convergent validity. Thirty nine point seven percent of the sample were male (n=119) and 181
(60.3%) were female. The average age was 31.56 (SD=2.88) years. Ten percent of the sample reported having been arrested.

**Procedure**

The preliminary instrument was sent to 14 experts, but only eight responded. The inclusion criteria guiding the selection of these experts was based on their expertise in the fields of violence or psychometrics, or preferably in both. Experts were recruited from different Mexican states including, San Luis Potosí, Mexico City, Sinaloa, Monterrey, and Guanajuato, as well as from the Spanish Balearic Islands. The semi-structured interviews in Galan (2016) suggested the following categories: violence as entertainment, violence as normal or common, and violence as trivial or unimportant. After the in-depth interviews (Galan, 2018), we added these new categories: enjoyment of violence, unnoticed violence, decreased support, violence as a form of hierarchy, justified violence, and violence as a requirement. These categories led to 100 items, which were sent to experts in order to assess content validity. After the content validity statistics, we dropped 18 items, 59 were retained, and 23 were modified. These modifications were based on an article by Merino and Livia (2009), which recommends a 0.7 value for Aiken’s V validation coefficient, which was the criterion to retain the item. We started with an Aiken’s V coefficient of .75, then we dropped the low score items we got .78 with a confidence interval with a lower limit of .63 and an upper limit of .91. The judges could assign a score in a range between 1 and 5; the most appropriate concordance coefficient to evaluate the agreement between evaluators is, according to Escobar-Pérez and Cuervo-Martínez (2008), Kendall’s W. This is illustrated in Table 1. Following Dubé’s proposed guidelines, an average of .26 is considered "fair," between .21 - .40.

We also added items following the judges’ suggestion, and at last we were left with a total of 84 items. Of that total items we proceed to exclude 24 with reliability coefficients below .3. We then proceed to run an EFA with the theoretical dimensions of: desensitization to violence in psychological, physical and sexual manifestations, also desensitization to exert violence, desensitization to witness violence that includes, as a second order factor, normative beliefs, prosocial and the implied amusement with violence.

**Statistics analysis.** We carried out a missing data imputation using a multivariate imputation by chained equations (MICE) software package (Van Buuren & Grothous-oudshoorn, 2011). The
The sample was randomly split into two subgroups; an 876-participant subgroup was used for EFA by means of Factor software (version 10.5), and the other subgroup, including 847 participants, was used for CFA by AMOS software (version 21.0).

The EFA was performed using unweighted least squares and a promin rotation with a polychorical correlation matrix, following the recommendations of Lloret-Segura, Ferreres-Traver, Hernández-Baeza and Tomás-Marco (2014). We ran a parallel analysis with optimal implementation (Timmerman & Lorenzo-Seva, 2011) to determine the number of ideal dimensions and we excluded items with loadings smaller than .4 and those loadings in two factors above .4. We evaluated the model’s characteristics using Goodness of Fit Index (GFI), Comparative Fit Index (CFI), reliability measures and Mardia’s multivariate asymmetry skewness and kurtosis (Mardia, 1970) measures, among others.

For the CFA we ran the structural model using maximum likelihood rotation and assessed construct validity GFI >.90, CFI > .90, RMSEA <.08 and Cmin/DF < 5. Once we got these characteristics evaluated the scale’s convergent validity using Average Variance Extracted (AVE) >.5 in every dimension and finally discriminant validity by having all the correlation between these constructs below 0.85. All these moments imply a Compose Reliability (CR) >.7 in every dimension (Asyraf, 2013). To obtain the criterion validity evidence we use a Pearson correlation between the total of both scales.

**Instrument.** We administered the Desensitization to Violence Scale for adults (F. Galan, Hernandez, Martinez and Aguilar, in press) and the Desensitization to Violence Scale for adolescents.

**Ethics.** The present study adhered to the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2017), which according to section 8.01 states that institutions are free to allow a study if they deem it adequate. Also, based on section 8.05 (about anonymity and harmless research), and section 8.8 (debriefing) the chance to sustain communication with the investigators was offered, and it was clarified that participation was completely voluntary.
Results

An EFA was conducted with the remaining 84 items (excluding those with low correlation item-total <.3), using Unweighted Least Squares (ULS) as method for extraction and Normalized Weighted Oblimin (Lorenzo-Seva, 2000) for rotation to achieve factor simplicity.

In the first rotation, following Mardia’s criterion and Muthen and Kaplan’s (1992) recommendations, we used a polychoric correlation matrix and in the process we excluded 63 items that either loaded on two factors (> .4) or had poor loadings (<.4). The results lead us to reduce the model to 5 dimensions: (1) diversion to exert psychological violence, (2) amusement to witness physical violence, (3) amusement to witness psychological violence, (4) prosociality and normalization, and (5) justification of violence.

The last EFA model resulted in good characteristics with 21 items. The model explained 73% of the cumulative variance and 46.79% with the first factor. Determinant matrix = 0.00 as well as a Bartlett's statistic = 64.367 df = 210; p < 0.000 and a Kaiser-Meyer-Olkin (KMO)=.89, which were considered satisfactory. In order to determine the number of dimensions we used the minimum average partial test (Velicer, 1976) that suggested three factors. Goodness of fit index (GFI) was .99, the reliability was estimated with Cronbach’s Alpha, the first factor score was .80, .82 for the second, .83 for the third, .77 and the last .61: normalization of violence, status, justification and enjoyment with violence and diversion to exert psychological violence.

Results of the CFA

We performed a CFA with the remaining five dimensions using maximum likelihood considering modification indices and all implied moments. The aim was to get the ideal characteristics and evidences of validity: construct, discriminant and convergent validity in the CFA model. The different models with the exact features of the CFA are described in the Table 1.

Table 1. Different CFA model fit measures of the desensitization to violence scale

<table>
<thead>
<tr>
<th>Model</th>
<th>X2</th>
<th>Cmin/df</th>
<th>p</th>
<th>SRMR</th>
<th>GFI</th>
<th>AGFI</th>
<th>TLI</th>
<th>CFI</th>
<th>Pclose</th>
<th>RMSEA</th>
<th>ECVI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>843.88</td>
<td>4.71</td>
<td>0.01</td>
<td>0.5</td>
<td>0.92</td>
<td>0.9</td>
<td>0.88</td>
<td>0.89</td>
<td>0.01</td>
<td>0.06</td>
<td>1</td>
</tr>
<tr>
<td>four factors</td>
<td>260.24</td>
<td>3.71</td>
<td>0.01</td>
<td>0.03</td>
<td>0.96</td>
<td>0.94</td>
<td>0.95</td>
<td>0.96</td>
<td>0.18</td>
<td>0.05</td>
<td>0.34</td>
</tr>
<tr>
<td>three factors</td>
<td>85.099</td>
<td>2.83</td>
<td>0.01</td>
<td>0.026</td>
<td>0.98</td>
<td>0.96</td>
<td>0.97</td>
<td>0.98</td>
<td>0.8</td>
<td>0.04</td>
<td>0.14</td>
</tr>
<tr>
<td>Last model</td>
<td>19.85</td>
<td>1.24</td>
<td>0.22</td>
<td>0.01</td>
<td>0.99</td>
<td>0.98</td>
<td>0.99</td>
<td>0.99</td>
<td>0.99</td>
<td>0.01</td>
<td>0.06</td>
</tr>
<tr>
<td>Unifactorial</td>
<td>376.87</td>
<td>11.77</td>
<td>0.01</td>
<td>0.06</td>
<td>0.92</td>
<td>0.87</td>
<td>0.86</td>
<td>0.9</td>
<td>0.01</td>
<td>0.1</td>
<td>0.44</td>
</tr>
</tbody>
</table>
The first model has acceptable features but some of them need to be improved, we proceed to apply the modification indices, and to erase the items in the factor of prosociality. In the model with four factors we can almost see all the desired properties, however, the \( p \) value was not achieved. We then proceeded to eliminate the Legitimation and Normalization of Violence factor because of the standardized residual covariances and validity concerns. The three dimensions model presented almost all the desired psychometric properties, even validity and reliability, but the expected \( p \)-value for the model was still short. The final model lost two items to achieve the desired psychometric properties. We proceeded to evaluate the model’s validity using the Average Variance Extracted (AVE) and the Composite Reliability (CR). Table 2 reports validity and reliability of the final model with and without the two items.

With the final model we proceed to test if there were any collinearity difficulties and all the VIF appeared lower than 3.0 between the different possibilities among the factors pointing that there were no method bias, also confirmed in the model features in the unifactorial solution. We present in Figure 1 and 2 the two last remaining models.

![Figure 1. Confirmatory Factor Analysis model for the desensitization to violence scale](image-url)

**Figure 1.** Confirmatory Factor Analysis model for the desensitization to violence scale model without \( p \) value
Figure 2. Final model of the desensitization to violence scale

Table 2. Psychometric properties of the desensitization to violence scale in the final and previous model

<table>
<thead>
<tr>
<th>Psychometric properties</th>
<th>Final model</th>
<th>Model without p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diversion to exert psychological violence (1)</td>
<td>Amusement to witness physical violence (2)</td>
</tr>
<tr>
<td>Composite Reliability (CR)</td>
<td>.82</td>
<td>.68</td>
</tr>
<tr>
<td>Average Variance Extracted (AVE)</td>
<td>.61</td>
<td>.52</td>
</tr>
<tr>
<td>Maximum Shared Variance (MSV)</td>
<td>.51</td>
<td>.33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.82</td>
<td>.78</td>
<td>.80</td>
</tr>
<tr>
<td></td>
<td>.61</td>
<td>.55</td>
<td>.50</td>
</tr>
<tr>
<td></td>
<td>.45</td>
<td>.26</td>
<td>.45</td>
</tr>
</tbody>
</table>
Results of criterion validity (third sample). Table 3 showcases the convergent validity of the Desensitization to Violence Scale which reveals that validity is satisfactory, with $r=0.732 \ p<0.001$ in both total of construct scores. *With the previous model in Figure 1.*

**Table 3.** Convergent validity between the desensitization to violence scales for adolescents and desensitization to violence scale for adults

<table>
<thead>
<tr>
<th>Factor</th>
<th>Normalization and legitimization of violence</th>
<th>Enjoyment with violence</th>
<th>Total desensitization to violence in adolescents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoyment in exerting psychological violence</td>
<td>0.360</td>
<td>0.630</td>
<td>0.872</td>
</tr>
<tr>
<td>Amusement in witnessing physical violence</td>
<td>0.514</td>
<td>0.571</td>
<td>0.912</td>
</tr>
<tr>
<td>Amusement in witnessing psychological violence</td>
<td>0.695</td>
<td>0.499</td>
<td>0.765</td>
</tr>
<tr>
<td>Total desensitization to violence scale for adolescents score</td>
<td>0.731</td>
<td>0.954</td>
<td>0.732</td>
</tr>
</tbody>
</table>

Pearson’s correlation significant at a 0.01 level (bilateral)

**Discussion**

The Desensitization to Violence Scale’s psychometric performance shows that it is a valid measure. The methodological contribution is relevant, since research on desensitization to violence has been limited to clinical or experimental experiences, or to instruments that do not measure the construct of desensitization to violence directly. Only two other instruments have similar themes. The first is Galdames and Aaron’s (2007) scale, which addresses violence legitimation beliefs but does not focus on adolescents; it properly addresses desensitization to violence, but the measurement is based on only one factor called "legitimacy as a fair defense", which could be similar to our scale’s component of "amusement with physical violence". The other instrument is the one proposed by Corey (2009) the Sensitization to Violence Scale, which is described only in his doctoral thesis. The explained variance did not exceed 35%, and its factors (exposure to violence, attitudes, social desirability, and nonviolence) are not properly woven into the construct of desensitization to violence, although that is mentioned in the thesis. Therefore, the Desensitization to Violence Scale assessed can be considered a valid scale that
offers an original vision. Many of its factors are based on Funk et al., (2004), who claim that desensitization to violence also increases pro-violent attitudes.

Regarding convergent validity, although the factors in both scales are not the same and the target population is also different, even with different questions and factors the scale obtained a remarkable score. It is crucial to highlight that the factor of legitimation and normalization of violence in the desensitization to violence scale for adults correlate near r=.7 with the desensitization to violence scale for adolescents. This implies that the factor validity could get diminished by the redundant measure, which means that these could be an aging characteristic.

The reliability and validity of the Desensitization to Violence Scale are adequate for measuring the violent phenomena currently taking place within the Mexican society. As Akers (2016) mentions, violence could lead the whole of society to increase crime rates, naturalize and accept the violent behavior as normative, and even generate positive responses towards it.

The field of social psychology could use the instrument to reveal more potential consequences of exposure to violence, along with its implications, such as increasing the acceptance of violence, thoughts of violent behavior, positive emotions toward violence, decreased sympathy and assistance to victims, and anxiety, as well as the emotional, cognitive, and psychological responses to violent events, attention to violence, possibility of violent behavior, and the effects on prosocial behavior (Galan & Preciado, 2014; Funk et al., 2004; Krahe, Möller, Kirwil, Huesman, Felber, & Berger, 2011; Su, Mrug & Windle, 2010; Staude-Müller, Bliesener, & Luthman, 2008).

Conclusion
The Desensitization to Violence Scale for adolescents has shown to possess all the required evidence of validity for the model. The factors measure an innovative construct that could lead to an accurate and reliable measure to revert, prevent and improve social programs and clinical interventions in the early ages. This instrument is expected to help understand, prevent and generate tools to verify the effectiveness of the efforts to reduce the increasing violence and the indifference or normalization that can result from exposure to real violent situations. Limitations: we need to compare if the remaining EFA and CFA with a gender approach and also study the relationship with exposure to violence, classification by context.
Acknowledgment
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References
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