Methodology

The Spanish Posttraumatic Growth Inventory - Short Form in Adult Survivors of Child Sexual Abuse

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ABSTRACT

Background: Child sexual abuse (CSA) survivors can experience psychological changes and growth as a consequence of their victimization experience, known as posttraumatic growth (PTG). The purpose of this study was to evaluate the dimensionality, reliability and validity of the Spanish version of the Posttraumatic Growth Inventory – Short Form (PTGI-SF) (Tedeschi & Calhoun, 1996) in a sample of 104 adult survivors of CSA. **Method:** Different models of PTGI-SF validated in different languages and samples were tested using Confirmatory Factor Analysis. **Results:** The results showed that the original five-factor model exhibited the best goodness of fit. Internal consistency was adequate for the general scale, and acceptable for the five different factors. Furthermore, positive correlations were found between the PTGI-SF total score and psychosocial and mental health problems, as well as gender differences, with women tending to report more PTG than men. **Conclusions**: These results suggest that the Spanish PTGI-SF is a brief, reliable, valid self-report measure for assessing PTG experienced by CSA survivors.

Validación de la Versión Española del *Posttraumatic Growth Inventory - Short Form* en Supervivientes de Abuso Sexual Infantil

RESUMEN

Antecedentes: La evidencia empírica muestra que las personas supervivientes de abuso sexual infantil (ASI) pueden experimentar cambios psicológicos y crecimiento como consecuencia de su experiencia de victimización, conocido como crecimiento postraumático (PTG). El propósito de este estudio era evaluar la dimensionalidad, fiabilidad y validez de la versión española del *Posttraumatic Growth Inventory – Short Form* (PTGI-SF) (Tedeschi & Calhoun, 1996) en una muestra de 104 personas adultos supervivientes de abuso sexual infantil. **Método:** Se evaluaron diferentes modelos del PTGI-SF validado en diferentes idiomas y para distintas muestras mediante el Análisis Factorial Confirmatorio. **Resultados:** Los resultados revelaron que el modelo original de cinco factores muestra la mejor bondad de ajuste. La consistencia interna resultó adecuada para toda la escala, y aceptable para los diferentes cinco factores. Además, se encontraron correlaciones positivas entre la puntuación total del PTGI-SF y los problemas psicosociales, así como, diferencias de género estadísticamente significativas, puesto que las mujeres reportaron más crecimiento postraumático que los hombres. **Conclusiones:** Los resultados sugieren que la versión española del PTGI-SF es una medida autoinformada breve, fiable y válida para evaluar el crecimiento postraumático experimentado por las personas supervivientes de abuso sexual infantil.

It is well known that traumatic events can lead survivors to experience various psychological changes related to their values, meaning and sense of life (Tedeschi et al., 2018). This result of trauma and its processing, which is self-perceived, is viewed as a positive outcome and results in psychological well-being (Joseph et al., 2005), referred to as posttraumatic growth (PTG).

For decades, PTG has been of interest in the field of health and clinical psychology, and the relationship between positive and negative outcomes of trauma has been studied (Joseph et al., 2012). The literature shows that there is a positive relationship between PTG development and the presence of sequelae from trauma (Dekel et al., 2012), with specific relevance for posttraumatic stress disorder (PTSD) (Shakespeare-Finch & Lurie-Beck, 2014).

Some authors found that the centrality of the trauma and its impact on identity could predict PTG development if there is meaningful, cognitive processing of the event (Boals & Schuettler, 2011). Most highlight the importance of the construction of a comprehensive narrative and rebuilding the meaning of the traumatic experience to develop PTG (Jirek, 2017).

Child sexual abuse (CSA) is a severe public health and social problem affecting the dignity, rights and freedom of children and adolescents (United Nations, 2021), affecting 8% to 31% of girls and 3% to 17% of boys (Barth et al., 2013). This kind of victimization implies long-term suffering and severe posttraumatic sequelae in adulthood that can be reflected in a vast array of symptoms and distress with high comorbidity (Maniglio, 2009).

Research focused on the devastating consequences of CSA is essential not only to recognize and address this problem (Ullman, 2007), but also to discover and highlight the other side of the trauma processing in CSA survivors, related to personal learning, self-regulation, personal strengths and well-being (Draucker et al., 2011).

PTG has been investigated in response to victimization in adulthood (Elderton et al., 2017), childhood abuse and neglect (Sheridan & Carr, 2020; Tranter et al., 2020), and specifically in CSA survivors (Hartley et al., 2016; Lev-Wiesel, 2008). The relationship between PTG and other variables in the healing process has been studied in female and male CSA survivors (Kaye-Tzadok & Davidson-Arad, 2016; Saint Arnault & Sinko, 2019; Schaefer et al., 2018), as well as the importance of understanding the sexual abuse experience and ascribing it or not to traditional gender norms (Easton et al., 2013).

Among the diverse measures for assessment of changes related to transformative and beneficial growth as an outcome of trauma (Tedeschi et al., 2018), the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) is the most used and validated in its 21-item version (Cadell et al., 2014; da Silva et al., 2009; Ho et al., 2013; Jaarsma et al., 2006; Maercker & Langner, 2001), and also offers self-reported measures, asking specifically about PTG as a consequence of the traumatic experience and noting its multidimensional nature. Unlike other traumatic experiences with highly replicated validation studies, including multiple forms of interpersonal violence (Pajón et al., 2020), the original PTGI for CSA survivors has only been validated for a United States male clergy-perpetrated CSA sample (Saltzman et al., 2015).

Although the PTGI is already considered a reasonably short measure, for convincing reasons related to the situation and context of participants (e.g. physical and mental suffering, or answering several measures for a study), a shorter form of the scale, Posttraumatic Growth Inventory – Short Form (PTGI-SF), was created (Cann et al., 2010), including 10 items selected and divided into the same five original dimensions.

The PTGI-SF may bring some advantages for the needs of CSA survivors when they are being assessed by professionals from attention services or are participating in a study: reduction in time as well as energy and mental effort needed to respond, especially if required to respond to several instruments. Given the sensitivity of the topic, serious ethical and intervention implications must be addressed. Using the short version of the inventory may offer functional and ethical advantages both for the psychosocial and therapeutic attention offered and for the advancement of research in this population: for example, it may lower participants' levels of distress and thus reinforce good practices in CSA research.

Although the PTGI-SF has not been tested nearly as rigorously as the 21-item version, the majority of validation studies have confirmed the factor structure presented by Cann et al. (2010), who found the best goodness of fit for 10 items and five correlated factors. The English version has been extensively used for the assessment of PTG in the study of sexual victimization (Louis, 2018; Ullman, 2014). This structure was defined by the five original factors, with two items in each factor: "relating to others" (items 8 and 20); "new possibilities" (items 7 and 11); "personal strength" (items 10 and 19); "spiritual change" (items 5 and 18); and "appreciation of life" (items 1 and 2).

However, other PTGI-SF versions have shown differences in factor structure and in the items selected from the full version (Table 1), with item 9 ("I am more willing to express my emotions") being the only item not selected for any of these short forms. For example, Prati & Pietrantoni (2014) found a five correlated factor structure in a 10-items version, but items 1, 7, and 19 were substituted by 14 in the "new possibilities" factor, 4 in the "personal strength" factor and 13 in the "appreciation of life" factor. Additionally, Rodriguez-Rey et al. (2016) showed the best fit for three-factor model in a 10-item version, with items that differed from those in Cann et al. (2010). Finally, Kaur et al. (2017) supported a one-dimensional model composed of 11 items, adding item 15 to the ones selected by the original authors. Table 1 summarizes the validation studies of the PTGI-SF (i.e., with data on country, language, factor structure, type and weight of sample, analysis, and items).

Although a version of the PTGI-SF has already been validated with a Spanish sample (Rodriguez-Rey et al., 2016), its structure was not consistent with other short versions that have been extensively confirmed (i.e., Cann et al., 2010). Nor has the PTGI-SF been validated for CSA victims (neither the Spanish version nor a version in another language).

The main goal of this study was to evaluate the dimensionality of the PTGI-SF in a sample of Spanish CSA survivors, and to test its psychometric properties based on the factor structure that best fits the data. It analyses the validity of the factor structure comparing different dimensional models (Cann et al., 2010; Kaur et al., 2017; Prati & Pietrantoni, 2014; Rodriguez-Rey et al., 2016), convergent validity and its relation with psychosocial and mental health problems, and internal consistency. Good practices for assessing PTG processes in CSA survivors using adequate and useful instruments are discussed. Moreover, in view of the evidence of gender differences in self-reported PTG (i.e., women are more likely to experience PTG than men: Vishnevsky et al., 2010), and the possible relevance of aspects related to processing in CSA, the gender variable was taken into account and gender differences were explored.

Table 1.
Studies of PTGI-SF dimensionality.

Author (year)	Language (Country)	Sample (n)	Factor: number of items
Cann et al. (2010)	English (U.S.A.)	Students exposed to life adversity (196)	F1(RO): 8, 20; F2(NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5(AL): 1, 2.
Kaler et al. (2011)*	English (U.S.A.)	Veterans from armed conflict (327)	F1(RO): 8, 20; F2(NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5 (AL): 1, 2.
Prati & Pietrantoni (2014)	Italian (Italy)	General population exposed to life adversity (1244)	F1(RO): 8, 20; F2(NP): 11, 14. F3(PS): 4, 10; F4(SC): 5, 18; F5 (AL): 2,13.
Cadell et al. (2014)*	French (Canada)	Caregivers and parents of life-limiting illness (47)	F1(RO): 8, 20; F2(NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5(AL): 1, 2.
Lamela et al. (2014)*	Portuguese (Portugal)	Divorced adults (482)	F1(RO): 8, 20; F2(NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5(AL): 1, 2.
Cardenas Castro et al. (2015)*	Spanish (Chile)	Students exposed to life adversity (681)	F1(RO): 8, 20; F2 (NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5(AL): 1, 2.
Horswill et al. (2016)*	English (USA)	General population exposed to life adversity (512)	F1(RO): 8, 20; F2(NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5(AL): 1, 2.
García & Wlodarczyk (2016)*	Spanish (Chile)	Natural disaster survivors (1817)	F1(RO): 8, 20; F2(NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5(AL): 1, 2.
Rodriguez-Rey et al. (2016)	Spanish (Spain)	Parents of critically ill children (143)	F1(SP): 2, 3, 4, 10, 12. F2(RO): 6, 20, 21; F3(SC): 5, 18.
Kaur et al. (2017)	English (U.S.A.)	U.S. service members (135843)	F1(PTG): 1, 2, 5, 7, 8, 10, 11, 15, 18, 19, 20.
Leong Abdullah et al. (2017)*	Malay (Malaysia)	Cancer patients (195)	F1(RO): 8, 20; F2(NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5(AL): 1, 2.
Veronese & Pepe (2019)*	Arabic (Palestine)	Health providers from armed conflict (338)	F1(RO): 8, 20; F2(NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5(AL): 1, 2.
Amiri et al. (2020)*	Persian	Students exposed to life adversity and cancer patients (563)	F1(RO): 8, 20; F2(NP): 7, 11. F3(PS): 10, 19; F4(SC): 5, 18; F5(AL): 1, 2.

Note: RO = Relating to others; NP = New possibilities; PS = Personal strength; SC = Spiritual change; AL= appreciation of life; SP = Self-perception.
*Original dimensionality and structure of PTGI-SF (Cann et al., 2010). Other structures for PTGI-SF were not confirmed by more than one study.

Method

Participants

Initially, 132 participants were recruited, but 28 of them were not included because the presence of missing values, which were systematically found in the same items. Finally, participants were 104 adult survivors of CSA (M = 44.2 years; SD = 11.6), mostly women (72.1%), born in Spain (91.3%). Additional socio-demographic characteristics of the sample are shown in Table 2.

Table 2.
Sociodemographic characteristics.

	n (%)
Civil status	
Single	27 (26.0)
Married/stable partner	56 (53.8)
Separated/divorced	19 (18.3)
Widower	2 (1.9)
Educational level	
Primary education/not completed	2 (1.9)
Secondary education	39 (37.5)
Higher education	62 (59.6)
Prefer not to answer	1 (1.0)
Employment situation	
Wage earner/self-employed	74 (71.2)
Unemployed	13 (12.5)
Retired	8 (7.7)
Incapacitated	4 (3.8)
Housewife	4 (3.8)
Prefer not to answer	1 (0.9)

With regard to the characteristics of sexual and other types of victimization, the mean age of onset of the sexual abuse was 7.9 years old (SD = 3.9, range: 1 to 17 years), and lasted a mean of 4.3 years (SD = 5.5). In 35 participants (33.7%; 10.3% of men and 42.7% of women) the abuse was intrafamilial, in 53 (51.0%; 86% of men and 37.3% of women) it was extrafamilial, and in 15 (14.4%; 3.4% of men and 18.6% of women) it was both. Most participants had experienced sexual abuse with physical contact (92.3%; 96.5% of men and 90.7% of women). Moreover, 78.6% (72.4% of men and 80.0% of women) had suffered another type of victimization (e.g., negligence, physical and psychological maltreatment and violence) from caregivers.

Instruments

Sociodemographic data and characteristics of sexual and other types of childhood victimization were obtained using an ad-hoc questionnaire.

Posttraumatic growth. The most recent Spanish translation (Pajón et al., 2020) of the PTGI (Tedeschi & Calhoun, 1996) was used to validate the PTGI-SF. The dimensional models from previously validated versions of the PTGI-SF (Cann et al., 2010; Kaur et al., 2017; Prati & Pietrantoni, 2014; Rodriguez-Rey et al., 2016) were selected for testing. All items were scored on a 6-point Likert scale ranging from 1 = *"I did not experience this change as a result of my crisis"* to 6 = *"I experienced this change to a very great degree as a result of my crisis"*. Good internal reliability, acceptable test-retest reliability, and validity have been demonstrated for the scale (Tedeschi et al., 2018).

Psychosocial and mental health problems. A checklist form referring to psychosocial and mental health problems related to sexual abuse experiences based on meta-analyses (Maniglio, 2009) was administered. Nineteen different problems were described, including: depressive, anxiety, posttraumatic stress and

obsessive-compulsive disorders, panic attacks, phobias, substance abuse, antisocial behavior, violent behavior, running away, sexual problems, revictimization in adulthood, prostitution, sexual assault perpetration, self-harm and suicidal ideation and behavior, sleep disorders, eating disorders. To assess the presence or absence of these problems, all items were scored on a dichotomous scale. Total scores can range from 0 to 19, with higher scores indicating a higher number of problems reported. In the present sample, this checklist has exhibited a high level of internal consistency (α = .83).

Procedure

Participants were recruited using a convenience and snowball non-probability sampling technique, from October 2018 to April 2019, according to the following inclusion criteria: adults who had experienced CSA and who had sufficient language skills to understand the survey questions. The researchers contacted Spanish organizations, professionals and activists working on CSA, victims who had publicly disclosed their experiences of CSA, and several media organizations including TV channels, newspapers, and radio programs, which disseminated the information so that participants could conduct the survey by phone or in person.

Written consent was obtained from all participants. No financial compensation was offered for taking part in the study. Individual interviews were conducted by researchers with expertise in collecting data on violence against children. The current study followed the basic ethical principles of the Declaration of Helsinki and was authorized by the Institutional Review Board (IRB00003099) of the study's home institution.

Data analysis

Descriptive statistics were calculated to describe the sociodemographic data, characteristics of sexual and other type of victimization; PTG; and psychosocial and mental health problems. Descriptive statistics were also calculated for the items. To identify the normality of data, skewness and kurtosis

were used, considering appropriate values between -2 and 2 and -7 to 7 respectively (Byrne, 2016). Based on all previous research about PTGI-SF dimensionality we decided to conduct confirmatory factor analyses (CFA) of different models (Garrido et al., 2016) using maximum likelihood, to test the goodness-of-fit of the Spanish PTGI-SF for a sample of CSA survivors. These models were selected to replicate the methodology of previous PTGI-SF validation studies exposed in Table 1 (Cann et al., 2010; Kaur et al., 2017; Prati & Pietrantoni, 2014; Rodriguez-Rey et al., 2016). For this purpose, we used several indexes and considered the following criteria (Hu & Bentler, 1999; Marsh et al., 2005): Chi Square/Degrees of Freedom Ratio (χ^2/df) is expected to be less than 2 and not significant; Normed Fit Index (NFI), Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) values $\geq$ .90 indicate an acceptable fit and values of $\geq$ .95 a good fit; Akaike Information Criterion (AIC) is used to compare two or more models, with smaller values indicating a better fit; and Root Mean Square Error Approximation (RMSEA) values $\leq$ .08 indicates an acceptable fit. Internal consistency was evaluated using Cronbach's alpha (α) for total and subscale total scores. The item discrimination was also calculated by corrected item-total correlation. Convergent validity was tested by Pearson's correlation coefficient between total PTGI-SF and Psychosocial and Mental Health Problems Checklist scores. Gender differences were explored by Student's t and Cohen's d considering values of 0.20, 0.50 and 0.80 as small, medium and large effect sizes respectively. Statistical analyses were conducted using SPSS25 and AMOS25.

Results

Score distribution

Descriptive analysis of the items used in different versions of PTGI-SF are displayed in Table 3. According to previously established criteria (Byrne, 2016) all items followed a normal distribution, except item 18, which showed a skew value of 2.38.

Table 3.
Descriptive statistics for the items.

Items	M (SD) (n = 104)	S	K
(1) I changed my priorities about what is important in life. *Cambié mis prioridades respecto a lo que es importante en la vida.*	3.7 (2.0)	-.23	-1.62
(2) I have a greater appreciation for the value of my own life. *Aprecio mucho más el valor de mi vida.*	2.9 (1.9)	.37	-1.39
(3) I developed new interests. *He desarrollado nuevos intereses.*	3.7 (1.9)	-.20	-1.55
(4) I have a greater feeling of self-reliance. *Confío más en mí mismo/a.*	2.9 (1.9)	.51	-1.24
(5) I have a better understanding of spiritual matters. *Siento que tengo más conciencia sobre temas espirituales.*	2.5 (1.9)	.79	-1.05
(6) I more clearly see that I can count on people in times of trouble. *Tengo más claro que puedo contar con gente cuando tengo problemas.*	2.8 (1.9)	.51	-1.31
(7) I established a new path for my life. *Establecí un nuevo camino a seguir en mi vida.*	3.3 (2.1)	.18	-.166
(8) I have a greater sense of closeness with others. *Me siento más cercano/a a los demás.*	2.9 (1.9)	.73	-1.36
(10) I know better that I can handle difficulties. *Soy más consciente de que puedo manejar las dificultades.*	3.3 (1.9)	-.03	-1.52
(11) I am able to do better things with my life. *Soy capaz de sacar mayor provecho de mi vida.*	2.8 (1.8)	.47	-1.26
(12) I'm better able to accept the way things work out. *Acepto mejor la manera en que salen las cosas.*	2.8 (1.8)	.56	-1.13
(13) I can better appreciate each day. *Aprecio más el día a día.*	2.9 (1.9)	.54	-1.25
(14) New opportunities are available which wouldn't have been otherwise. *Se me han presentado nuevas oportunidades que no hubiese tenido de otro modo.*	2.5 (1.8)	.86	-.68
(15) I have more compassion for others. *Siento más compasión por los demás.*	3.9 (1.9)	-.31	-1.44
(16) I put more effort into my relationships. *Me esfuerzo más en mis relaciones.*	3.1 (1.9)	.26	-1.49
(17) I am more likely to change things which need to be changed. *Estoy más dispuesto/a intentar cambiar aquello que requiere un cambio.*	3.9 (1.9)	-.39	-1.29
(18) I have a stronger religious faith. *Tengo una fe religiosa más fuerte.*	1.6 (1.3)	2.38	4.45
(19) I discovered that I'm stronger than I thought I was. *Descubrí que soy más fuerte de lo que creía ser.*	4.3 (1.9)	-.65	-1.11
(20) I learned a great deal about how wonderful people are. *Aprendí mucho sobre lo maravillosa que es la gente.*	2.5 (1.7)	.82	-.79
(21) I better accept needing others. *Acepto major el hecho de necesitar a os demás.*	2.8 (1.8)	.37	-1.40

Note: Item 9 was not included in the analysis. M = mean; SD = Standard Deviation; S = Skewness; K = Kurtosis

Dimensional structure

To evaluate the factorial structure of the Spanish PTGI-SF, different models were selected to be tested using CFA (Table 4). The results showed that the five-factor model and second-order five-factor models were supported. The first-order five-factor model demonstrated better fit than the second-order five-factor model.

Intercorrelations between factors (Table 5) ranged from $r = .45$ ("personal strength" with "spiritual change") to $r = .75$ ("relating to others" with "new possibilities").

Table 4.
Goodness-of-fit indices for the different dimensional structure models.

Model	χ^2/df	NFI	CFI	TLI	AIC	RMSEA (90% CI)
Rodríguez-Rey et al. (2016) 3-factors/12-items	1.869	.856	.926	.907	199.869	.092 (.066-.117)
Kaur et al. (2017) 1-factor/11-items	2.964	.799	.854	.818	196.404	.138 (.111-.166)
Prati & Pietrantoni (2014) 5-factors/10-items	1.839	.932	.967	.940	125.976	.090 (.047-.131)
Cann et al. (2010) 1-factor/10-items	2.676	.835	.888	.855	153.654	.128 (.097-.159)
Cann et al. (2010) 5-factors/10-items	1.364	.940	.983	.969	94.096	.059 (.000-.105)
Cann et al. (2010) 5-factor/second-order	1.559	.917	.968	.952	116.762	.074 (.026-.113)

Note: χ^2 = Chi square; df = degrees of freedom; NFI = Normed Fit Index; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; AIC = Akaike's Information Criteria; RMSEA = Root Mean Squared Error of Approximation; CI = Confidence Interval

Table 5.
Intercorrelations between factors.

	RO	NP	PS	SC	AL
RO					
NP	.75***				
PS	.61***	.75***			
SC	.47***	.58***	.45***		
AL	.58***	.65***	.49***	.45***	

Note: RO = Relating to others; NP = New possibilities; PS = Personal strength; SC = Spiritual change; AL = Appreciation of life; **p< .01; *** p< .001

Internal consistency

Internal consistency was adequate for the 10-item scale ($\alpha= .9$) and acceptable for the different factors, ranging from .70 to .79. The factor loadings from each of the five latent variables to the 10 items of the five-factor model ranged from .58 to .93 (Table 6).

Convergent validity

In order to analyze convergent validity, the PTGI-SF factors were correlated with psychosocial and mental health problems score. As expected according to previous literature, PTG correlated with expressing social or mental suffering or difficulties for all factors (Table 7). The correlation coefficients between these variables ranged from .27 ($p < .01$) for the factor "spiritual change" to .37 ($p < .001$) for "appreciation of life".

Gender differences

Significant gender differences in PTG were found only but strongly for "personal strength" factor. Women significantly scored higher than men ($p =.001$) with a moderate-high effect size ($d = .74$). Nevertheless, it could be considered that values for the factor "new possibilities" were close to show also gender differences with the same direction. These results are shown in Table 8.

Table 6.
Standardized regression weights from the CFA and internal consistency.

Factor/ scale	Item	Corrected Item-Total Correlation	Items loadings	α
PTGI-SF				.90
RO	(8) I have a greater sense of closeness with others.	.70	.81	.79
	(20) I learned a great deal about how wonderful people are.	.71	.82	
NP	(7) I established a new path for my life.	.74	.72	.74
	(11) I am able to do better things with my life.	.70	.83	
PS	(10) I know better that I can handle difficulties.	.70	.87	.75
	(19) I discovered that I'm stronger than I thought I was.	.63	.69	
SP	(5) I have a better understanding of spiritual matters.	.62	.92	.69
	(18) I have a stronger religious faith.	.44	.63	
AL	(1) I changed my priorities about what is important in life.	.49	.59	.70
	(2) I have a greater appreciation for the value of my own life.	.73	.93	

Note: RO = Relating to others; NP = New possibilities; PS = Personal strength; SC = Spiritual change; AL = Appreciation of life; α = Cronbach's alpha coefficient

Table 7.
Pearson correlations between factors of PTGI-SF and Psychosocial and Mental Health Problems Checklist score.

	RO	NP	PS	SC	AL
Psychosocial and mental health problems	.34***	.36***	.29**	.27**	.37***

Note: RO = Relating to others; NP = New possibilities; PS = Personal strength; SC = Spiritual change; AL = Appreciation of life; **p< .01; ***p< .001

Table 8.
Gender differences in PTG.

Factors	Total M (SD) (n = 104)	Male M (SD) (n = 29)	Female M (SD) (n = 75)	t (p-value)	Cohen's d
RO	5.3 (3.4)	4.9 (3.6)	5.5 (3.3)	0.784 (.451)	.17
NP	6.0 (3.5)	4.9 (3.4)	6.4 (3.4)	1.983 (.050)	.44
PS	7.5 (3.4)	5.8 (3.4)	8.2 (3.1)	3.358 (.001)	.74
SC	4.1 (2.9)	3.4 (2.6)	4.3 (3.0)	1.587 (.118)	.32
AL	6.7 (3.5)	6.1 (3.8)	6.9 (3.3)	1.059 (.292)	.23

Note: RO = Relating to others; NP = New possibilities; PS = Personal strength; SC = Spiritual change; AL = Appreciation of life; M= mean; SD = Standard deviation; t = Student's t statistic.

Discussion

This is the first study reporting the dimensionality of the PTGI-SF in a sample of CSA survivors. The results show that the Spanish PTGI-SF offers valid and reliable scores for this population.

Firstly, CFA of the corresponding models of different versions of the PTGI-SF found in the literature (Cann et al., 2010; Kaur et al., 2017; Prati & Pietrantoni, 2014; Rodriguez-Rey et al., 2016) supported the original dimensional structure of the PTGI-SF. The comparison between all fit indexes resulting from CFA confirmed the 10-item and five-factor correlated model as the one with the best goodness of fit, followed by the second-order five-factor model, which showed acceptable fit; the one-factor model was not supported, as reported by Cann et al. (2010). Fit index values of this five-factor correlated model were similar to those found by Cardenas Castro et al. (2015), Lamela et al. (2014) and Cadell et al. (2014), and showed better fit than that reported by Prati & Pietrantoni (2014). Versions with more than 10 items (Kaur et al., 2017; Rodriguez-Rey et al., 2016) demonstrated poor fit.

Second, the internal consistency was satisfactory for all factors and for the whole scale, and factor loadings were adequate, comparable to those of the previously published versions.

Third, moderate positive correlations between PTG and psychosocial and mental health problems were found in this study. This relation suggests that mental suffering and social difficulties are compatible with the PTG experience by CSA survivors, as previously stated (Dekel et al., 2012). Moreover, psychosocial and mental health problems are a probable aftermath of CSA, which could increase the consciousness of the trauma effect and facilitate PTG development (Lahav et al., 2020). This is consistent with the concept of PTG as a process more related to the self-development of well-being than to functional adjustment (Joseph et al., 2005). In the same vein, from the well-being and recovery of mental illness perspectives, it is proposed that well-being is more related to building a meaningful and satisfying life than to the avoidance of psychiatric symptoms and mental disorders (Slade et al., 2019), and that PTG is also a probable outcome even when living with these symptoms if there is cognitive and emotional availability for meaning making and effective coping (Mazor et al., 2018).

Finally, consistent with many studies (see Vishnevsky et al., 2010), gender differences were found in self-reporting PTG. Women tend to report more PTG than men with a moderate effect size. These results suggest that further implications need to be taken into account from a gender perspective. Culturally persistent sexism affects the way of living following victimization and especially childhood sexual victimization, influencing the construction of identities in relation to gender and sexuality, while those identities go through the sexual abuse interpretation (Archdeacon, 2012). According to a hegemonic cultural and social framework, the stigma of CSA and social reactions differ between men and women. While men are more likely to feel that sexual victimization may question their hegemonic masculinity and thus do not disclose their experience (Ralston, 2019), women are not only recognized as vulnerable victims, but are also blamed for this situation (Alaggia, 2005). Constructing a comprehensive narrative that gives meaning to the traumatic experience is essential for PTG development in both men and women (Draucker et al., 2011), so narratives and experiences of sexuality as well as the acknowledgment of victimization may be very important (Easton et al., 2013). These authors also found an association between PTG and non-normative masculinity for men. Although a few recent studies have focused on adverse child among women in Spain, including child sexual abuse (Ferragut, 2021; Fontanil, 2021), this research needs to be complemented by studies that help us to understand the universe of both male and female survivors, in terms of pain and trauma but also in terms of hope and strength. Therefore, further research from a gender perspective may be necessary to identify possible ways of achieving repair, recovery, and empowerment for CSA survivors.

Several limitations should be noted in this study. First, a current obstacle in CSA research is the difficulty of recruiting CSA samples, a problem that limits the statistical analysis. The sample size was not large enough to produce good fit indexes. However, it did allow us to conduct a CFA analysis for the PTGI-SF, obtaining similar results to those reported elsewhere. Second, the sample was imbalanced in terms of gender, since it comprised mostly women. This may have been a disadvantage for the gender analysis, but the percentages may well be reasonably representative of a CSA sample (Barth et al., 2013). Third, participants were recruited using convenience sampling, which may have influenced the results obtained. The nature of self-report methods may imply recall bias, social desirability or poor collection, which could have affected the validity of the results. Moreover, since participants may have been those victims of CSA who were most interested in the study, their representativeness of any given population cannot be assumed.

All these issues must be taken into consideration in future research in the field of CSA and PTG. Furthermore, the study of the relation of PTG with variables like resilience, social support, and spirituality in CSA survivors is a challenge that should be taken on by researchers.

The Spanish PTGI-SF is a brief, reliable and valid self-report measure for assessing PTG experienced by CSA survivors. Our results show that psychological suffering and difficulties in the aftermath of CSA experiences are not only compatible with building personal growth and a meaningful life, but are also related. Using a short form to assess PTG allows participants to reduce the time, effort, and distress involved in providing data, consistent with being sensitive to ethical issues involved in interventions and research with CSA survivors. In addition, the gender perspective should be included when working with survivors since women seem to report more personal strength and explore more new possibilities and paths in life than men.

Conflict of interest

The authors declare no conflicts of interest.

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