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LETTER TO THE EDITOR



The religious faith item of the Spanish Posttraumatic Growth Inventory (PTGI) and its Short Form (PTGI-SF): challenges and solutions

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ABSTRACT

Background: The Posttraumatic Growth Inventory (PTGI) and its Short Form (PTGI-SF) are two instruments highly used in research on posttraumatic growth. They include a religious growth item that has been demonstrated to be problematic in cultures that are not very religious. Previous research has addressed this issue in other countries, but no attention has been paid to this critical problem in Spanish samples.

Objective: Our aim is to address the psychometric issues presented by the religious growth item in Spain.

Method: To do so, we reviewed several studies conducted with various populations in Spain.

Results: The scores of the religious growth item in Spain present very low means and standard deviations, as well as high skewness and kurtosis, all of which point to a floor effect. The item scores show low item-test correlations, and it has failed to load on a specific dimension in factor analyses, thus casting doubts about its validity.

Conclusions: The inventory does not seem to work properly in its current form in Spain. The inappropriateness of the item measuring religious growth in Spain may be due to cultural reasons. We recommend using the PTGI expanded version (PTGI-X) instead of the PTGI and exploring the possible substitution of the religious growth item in the PTGI-SF for an alternative item. In both cases, ascertaining the psychometric properties of the scores in Spain will be necessary.

El ítem de fe religiosa en el Inventario de Crecimiento Postraumático (PTGI) en Español y su Forma Breve (PTGI-SF): Desafíos y soluciones

Antecedentes: El Inventario de Crecimiento Postraumático (PTGI) así como su versión corta (PTGI-SF) son dos instrumentos frecuentemente utilizados en la investigación de crecimiento postraumático. Incluyen un ítem de crecimiento religioso que ha mostrado ser problemático en países que no son muy religiosos. La investigación previa ha abordado este problema en otros países, pero sigue siendo una tarea pendiente en España.

Objetivo: Nuestro propósito es abordar los problemas psicométricos que presenta en España el ítem que utilizan para evaluar el crecimiento religioso.

Método: Se revisaron varios estudios realizados en España con muestras diversas.

Resultados: Las puntuaciones del ítem de crecimiento religioso muestran medias y desviaciones típicas muy bajas en España, así como una asimetría y curtosis elevadas, todo lo cual indica un efecto suelo. Asimismo, este ítem presenta una baja correlación ítem-test y no ha mostrado un peso significativo en ninguna dimensión concreta en los análisis factoriales de varios estudios. Todo ello genera importantes dudas sobre la validez del ítem.

Conclusión: El inventario no funciona adecuadamente en su formato actual en España. La inadecuación del ítem que mide crecimiento religioso en España puede deberse a diferencias culturales. Se propone el uso de la versión extendida (PTGI-X) en lugar del PTGI original, así como explorar la posible sustitución del ítem de crecimiento religioso en el PTGI-SF por un ítem alternativo. En ambos casos, será necesario comprobar las propiedades psicométricas de las puntuaciones en España.

西班牙创伤后成长量表 (PTGI) 及其简表 (PTGI-SF) 的宗教信仰条目: 挑战与解决方案

背景: 创伤后成长量表 (PTGI) 及其简表 (PTGI-SF) 是创伤后成长研究中广泛使用的两种工具。其中包括一个宗教成长条目, 该条目已被证明在宗教信仰不强的文化中存在问题。之前的研究已经在其他国家解决了这个问题, 但没有注意到西班牙样本中的这个关键问题。

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关键词

创伤后成长; PTGI; 心理测量特性; 精神成长

HIGHLIGHTS

- The religious growth item in the PTGI and the PTGI-SF show serious psychometric validity issues in Spain. The PTGI Expanded version (PTGI-X) should be used instead of the PTGI in Spain. For the PTGI-SF, the religious item needs to be substituted.

目的: 我们旨在解决西班牙宗教成长条目带来的心理测量问题。

方法: 为此, 我们综述了对西班牙不同人群进行的几项研究。

结果: 西班牙宗教成长条目的得分呈现出非常低的均值和标准差, 以及较高的偏度和峰度, 所有这些都表明存在地板效应。条目得分显示条目与测试的相关性较低, 并且未能载荷因子分析中的特定维度, 因此对其效度产生了怀疑。

结论: 量表目前的形式在西班牙似乎并不运行良好。测量西班牙宗教成长的条目不恰当可能是由于文化原因。我们建议使用 PTGI 扩展版本 (PTGI-X) 代替 PTGI, 并探索用 PTGI-SF 中的宗教成长条目替代条目的可能性。这两种情况下都有必要确定西班牙得分的心理测量特性。

Dear Editor,

The Posttraumatic Growth Inventory (PTGI), developed by Tedeschi and Calhoun (1996), is the most frequently used instrument to measure posttraumatic growth (PTG; Gleeson et al., 2021; Pięta & Rzeszutek, 2021). Its 21 items assess five PTG domains: Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation of Life. The items are rated by respondents on a 6-point-Likert scale from 0 (*I did not experience this change as a result of my crisis*) to 5 (*I experienced this change to a very great degree as a result of my crisis*). A 10-item short version of the PTGI (the PTGI-Short Form, PTGI-SF; Cann et al., 2010) was later developed with the same response scale. This shortened version includes two items from each of the five dimensions in the PTGI and allows reducing the time needed to register participants' PTG.

The psychometric properties of the scores of both the PTGI and the PTGI-SF have been assessed in Spain several times, including clinical and non-clinical populations such as cancer and HIV patients (Costa Requena & Gil Moncayo, 2007; Garrido-Hernansaiz et al., 2017), adults following the COVID-19 national lockdown (Garrido-Hernansaiz et al., 2022), university students (Pajón et al., 2020), parents of critically ill children (Rodríguez-Rey et al., 2016), and child sexual abuse adult survivors (Sicilia Matas et al., 2022). In general terms, the number of items in the PTGI and the PTGI-SF varied across studies, but the authors reported good reliability and validity.

Despite the sound psychometric properties found in the different studies with Spanish samples, authors have scarcely addressed some relevant issues concerning the Spiritual Change (SC) domain in both the PTGI and the PTGI-SF. The SC domain presents two main issues that hinder its utility. First, the reported mean score on the SC domain tends to be much lower than the mean scores on the other domains (Celdrán et al., 2021; Garrido-Hernansaiz et al., 2022; Pajón et al., 2020; Rodríguez-Rey & Alonso-Tapia, 2019; Sicilia Matas et al., 2022), and sometimes SC has not even emerged as a PTG domain in factor analyses (Costa Requena & Gil Moncayo,

2007; Garrido-Hernansaiz et al., 2017). Second, the reliability (internal consistency) of the scores of the SC domain has also been the lowest of all the domains in several studies (Garrido-Hernansaiz et al., 2022; Pajón et al., 2020; Sicilia Matas et al., 2022), even below the threshold of .70.

In both the original PTGI and the PTGI-SF, the SC domain is measured by only two items: *I have a stronger religious faith* (item 18 in the PTGI and 8 in the PTGI-SF) and *I have a better understanding of spiritual matters* (item 5 in the PTGI and 4 in the PTGI-SF). The issues in the SC domain appear to be due to the item referring to religious growth. Research has reported worrisome psychometric data regarding this item—and not the other SC item, which worked similarly to the rest of the inventory's items. For instance, in the study by Garrido-Hernansaiz et al. (2022), the religious growth item had a mean of .38 and a standard deviation of .78, whereas the remaining items (including the other SC item) had means between 1.40 and 2.19 and standard deviations between 1.16 and 1.59. Similar data were reported by Sicilia Matas et al. (2022) and Costa Requena and Gil Moncayo (2007), which were the only two other Spanish studies reporting item descriptive data. Additionally, in the two studies that reported items' skewness and kurtosis (Garrido-Hernansaiz et al., 2022; Sicilia Matas et al., 2022), the religious growth item showed the highest values (even doubling or tripling the next highest values), indicating that the responses to this item were grouped well below the mean and were not normally distributed—indeed, the most common reply to this item was 0 (*No change*). Furthermore, the corrected item-total correlation for the religious faith item was the lowest of all the item-total correlations in the two studies where these statistics were provided (Costa Requena & Gil Moncayo, 2007; Sicilia Matas et al., 2022). Similarly, two studies that conducted factor analyses concluded that this item ought to be left out of the scale since its scores did not correlate sufficiently with the other items' scores and did not contribute to any domain (Costa Requena & Gil Moncayo, 2007; Garrido-Hernansaiz et al., 2017).

The issues concerning the religious faith item are not new and are probably underreported, as many

studies fail to include item descriptive statistics. The discussed results suggest that this item shows a clear floor effect and does not adequately discriminate different levels of SC. Consequently, the religious faith item is not valid methodologically and fails to adequately capture SC in Spain, casting doubts about its use. Cultural variations may explain why this item performs well in some countries and badly in others. Research shows that the scores on SC have generally been more pronounced in Latin America or Africa, which tend to be more collectivistic and religious, than in Western countries (Exenberger et al., 2019; Exenberger et al., 2022; Páez et al., 2013; Włodarczyk et al., 2016). Thus, this item tends to show a potential floor effect in cultures like Spain that are less religious in general terms, where SC may be less religious and more existential (Tedeschi et al., 2017; Vázquez & Páez, 2010). This methodological issue prevents the effective measurement of spiritual growth in these communities.

As a first step to address the difficulties arising from the SC domain, Tedeschi et al. (2017) conducted new research to broaden spiritual growth assessment. The authors added four new items representing a diversity of cultural perspectives to the original 21-item PTGI, creating the PTGI Expanded Version (PTGI-X). This instrument has been tested in three culturally and religiously different samples from Japan, Turkey, and the United States of America. However, the psychometric properties of this extended instrument have not been assessed in Spain yet. Given the challenges with the religious item described above, new research should urgently explore the properties of the PTGI-X in the Spanish context, so that it may be used instead of the PTGI. Moreover, concerning the Spanish PTGI-SF, we recommend exploring the possible substitution of the religious faith item for another SC item from the PTGI-X in Tedeschi et al.'s (2017) study. Future research should examine this option and determine the psychometric properties of the scores of a modified version of the Spanish PTGI-SF.

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Data availability

Data sharing does not apply to this article as no new data were created or analyzed in this study.

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