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Personal Growth Initiative Scale-II: validation of Spanish translation in Paraguay

Escala de Iniciativa de Crecimiento Personal-II: validación de la traducción al español en Paraguay

Escala de Iniciativa de Crescimento Pessoal-II: validação da tradução espanhola no Paraguai

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Resumen

La iniciativa de crecimiento personal es un constructo que se ha investigado en los últimos años y ha demostrado un carácter transcultural. En la actualidad, se vincula al mismo con otros conceptos relacionados a la psicología clínica y el *counseling*. Para poder realizar estudios en los contextos latinoamericanos, resulta imprescindible que se traduzca y adapte instrumentos que midan dicho constructo. En el presente trabajo se describe la traducción al español y validación factorial de la Escala de Iniciativa de Crecimiento Personal-II en una muestra de 219 universitarios de la ciudad de Asunción (Paraguay). Además, se presentan evidencias de validez basadas en relaciones con otras variables, como ser esperanza y satisfacción con la vida. Se realizaron análisis factoriales confirmatorios y un modelado exploratorio de ecuaciones estructurales que demostraron ajuste aceptable de un modelo de cuatro factores con modificaciones, tal como proponen otros antecedentes. Por otro lado, los coeficientes de correlación de este constructo con la esperanza y satisfacción con la vida otorgan buena evidencia de validez basada en relaciones con otras variables. Se comenta la utilidad de la escala para su uso en el ámbito clínico. En particular, se apuntala su utilidad como predictor de cambio en psicoterapia, ya que el concepto se relaciona íntimamente con factores motivacionales en el proceso terapéutico, y puede ser un predictor de recaídas a largo plazo.

Palabras clave: iniciativa de crecimiento personal; análisis factorial; modelado de ecuaciones estructurales; confiabilidad y validez

Abstract

Personal growth initiative is a construct that has been investigated in recent years, and has shown a cross-cultural character. Currently, it is linked to other concepts related to counseling and clinical psychology. To carry out studies in Latin American contexts, it is essential that instruments that measure this construct be translated and adapted. The present work describes the translation into Spanish and validation of the Personal Growth Initiative Scale-II in a sample of 219 university students from the city of Asunción (Paraguay). In addition, data for validity evidence in relation with other variables such as the constructs of hope and satisfaction with life are presented. Confirmatory factor analyses and an exploratory structural equation model demonstrated acceptable fit of a four-factor model with modifications, as suggested by other antecedents. On the other hand, correlations of this construct with hope and satisfaction with life give good validity evidence in relation to other variables. The usefulness of the scale for its use in the clinical setting is discussed. In particular, its usefulness as a predictor of change in psychotherapy

is underpinned, since the concept is closely related to motivational factors in the therapeutic process and can be a predictor of relapses in the long term.

Resumo

A iniciativa de crescimento pessoal é um construto que vem sendo investigado nos últimos anos e que apresenta caráter transcultural. Atualmente, está vinculado a outros conceitos relacionados à psicologia clínica e ao aconselhamento. Para a realização de estudos em contextos latino-americanos, é fundamental que os instrumentos que medem esse construto sejam traduzidos e adaptados. O presente trabalho descreve a tradução para o espanhol e a validação da Personal Growth Initiative Scale-II em uma amostra de 219 estudantes universitários da cidade de Assunção. Além disso, são apresentados dados de evidências de validade em relação a outras variáveis como ser os construtos esperança e satisfação com a vida. Foram realizadas análises fatoriais confirmatórias e modelado exploratório de equações estruturais que demonstraram ajuste aceitável de um modelo de quatro fatores com modificações, como sugerido por outros antecedentes. Por outro lado, os coeficientes de correlação deste construto com esperança e satisfação com a vida dão bons evidências de validade em relação a outras variáveis. A utilidade da escala para seu uso no ambiente clínico é discutida. Em particular, sua utilidade como um preditor de mudança em psicoterapia é sustentada, uma vez que o conceito está intimamente relacionado a fatores motivacionais no processo terapêutico, e pode ser um preditor de recaídas a longo prazo.

Palavras-chave: iniciativa de crescimento pessoal; análise fatorial; modelado de equações estruturais; confiabilidade e validade

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Robitschek's (1998) work condense the idea that people can improve themselves through a deliberate pursuit of personal growth, he defines personal growth initiative (PGI) as a developed set of cognitive and behavioral skills that facilitate self-improvement. In theoretical developments, this concept founds itself on two main ideas: that personal growth is intentional and that the skills that facilitate it are transferable from one domain of life to another (Robitschek et al., 2012).

PGI has been the focus of attention of researchers from the field of counseling and clinical psychology. Individuals presenting with high PGI have been described as more aware of personal change over time and more proactive in learning and achieving personal goals (Borowa et al., 2018). They are also more likely to take responsibility for drawbacks and shortcomings rather than attributing them to external factors (Keefer et al., 2018).

In the field of clinical and counseling psychology, PGI has been related to theories of change such as that of Prochaska y DiClemente (2005), and in particular with the preparation stage. In this stage, clients in a therapeutic process have intention to change and are prepared to carry out the actions that facilitate that change (Prochaska & DiClemente, 2005; Weigold et al., 2018).

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The interest in PGI originated from the intention to measure and distinguish what makes certain people more prone to make changes that can help them improve and achieve their goals, as well as being more open to review their practices and behaviors in pursuit of improvement (Robitschek et al., 2012). At that time, questions remained as to whether it would have to do with a personality trait or modifiable behaviors, whether there would be pre-existing individual differences in these areas, and whether it would be possible to increase the resolve and ability to work on unique personal development (Robitschek et al., 2012).

Two conceptual points are of importance in PGI theory, according to Robitschek et al. (2012). First, the type of personal change it seeks to capture is intentional, purposeful, goal-oriented change; therefore, it differs from other perspectives of personal change that reflect an appreciation of change, but do not include intentionality in behaviors that are geared to foster change. Second, this initiative is composed of skills that are transferable to any sphere of human life, rather than focusing on one domain of personal growth. The process of personal growth is similar in several domains of life, so skills used in one domain in order to develop can be extrapolated and used in another domain since behaviors are analogous (Robitschek et al., 2012). This opens the way for interventions that can increase PGI and thus potentially positively influence various aspects of people's lives.

Personal Growth Initiative in practice

PGI is a predictor of resilience to stressors. Behavioral aspects of the construct have been found to predict higher levels of posttraumatic stress symptoms, but at the same time also predict higher levels of posttraumatic growth (Shigemoto et al., 2016). These relationships may indicate that a lack of intentional behavioral improvement and Using Resources for change favors the emergence of avoidant behaviors, which in turn decreases the likelihood of recovery from trauma. Conversely, greater frequency of initiative toward behaviors aimed at confronting the trauma may initially lead to higher levels of stress, but after exposure the stress will decrease. Thus, low levels of behavioral aspects of PGI in a clinical assessment could suggest primary interventions for coping and emotional regulation skills, as these are factors that promote the development of emotional disorders (Barlow, 2018).

Second, PGI can be taken into account in an assessment process to decide whether to participate in a psychotherapeutic process. Given its link to locus of control (Borowa et al., 2018) and with stages of change in psychotherapy (Prochaska & DiClemente, 2005; Weigold et al., 2018) an assessment of PGI can help to decide whether or not to initiate a therapeutic process given the client's characteristics, or whether to do so after a motivational interview.

PGI Measurement

It is in this context that Robitschek (1998) developed the Personal Growth Initiative Scale (PGIS), a unidimensional scale for evaluating results of a program for adults seeking personal growth. The original PGIS had certain theoretical and methodological limitations, so a second version (PGIS-II) was created, consisting of four scales, for which there is evidence of validity based on internal structure in terms of factor structure, high internal consistency and acceptable temporal stability; as well as evidence of validity based on relationships to other variables including concurrent and discriminant evidence (Robitschek et al., 2012).

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There are several differences between the PGIS-II and the original PGIS, most notably the presentation in subscales. The four subscales of this new instrument are: a) Intentional Behavior, b) Using Resources, c) Planfulness, and d) Readiness for Change. However, there is some debate as to whether the Planfulness and Readiness for Change scales are part of the same component (Borowa et al., 2018; Robitschek et al., 2012). In addition, evidence exists for a second-order factor comprising the four first-order factors (Weigold et al., 2018).

In turn, these four scales can be characterized as behavioral or cognitive. Regarding behavioral aspects of PGI, the Intentional Behavior subscale refers to behaviors that denote commitment to change, and Using Resources alludes to leveraging external resources in the change process. In terms of cognitive aspects, the Planfulness subscale refers to the development of a plan for change, and Readiness for Change consists of the individual's knowledge of when to begin said change (Weigold et al., 2018).

Since the development of the instrument in its two versions, PGI showed direct relationships with instrumentality, assertiveness, internal locus of control, and psychological well-being; as well as inverse relationships with locus of control due to chance (Robitschek, 1998; 1999) and depression (Danitz et al., 2018). Relationships between PGI, other psychopathological processes, and resilience indicate that PGI plays a role in psychopathological processes and resilience as a predictor variable. Relationships of PGI with other constructs vary between genders; it has been proposed that differences are likely because personal growth goals vary according to social and cultural expectations (Robitschek et al., 2012).

Personal Growth Initiative in Spanish-Speaking Populations

Translations and validations of this scale have been carried out for different languages and cultures, and findings indicate that the four-factor structure is maintained for all cases (Borowa et al., 2018; Pinto Pizarro Freitas et al., 2018; Schönfeld & Mesurado, 2020). PGI is a multiculturally valid construct, although it presents qualitative differences with respect to the type of personal growth that is valued in each culture (Robitschek, 2003).

Among some of these cultural differences, the Using Resources subscale (which includes turning to social resources) presents a lower correlation (*r* values of between .33 and .44 with various subscales) with the other subscales compared to the other intercorrelations (Robitschek et al., 2012). Authors hypothesized that this relates to the fact that the studies on the construct included predominantly European-American samples, whose cultures value individualism and autonomy. Possibly, in collectivist cultures (such as those represented in this study) the Using Resources subscale would correlate highly with the other subscales. For example, Hispanic American populations PGI relates to valuing the environment (Robitschek, 2003).

Studies with collectivist cultures, similar to the one included in the present study, found differences with the original structure of the PGIS-II. In the study by Pinto Pizarro Freitas et al. (2018), residual covariances exist between items 2 and 3 and items 6 and 14, so that adequate model fit is achieved only when those two pairs of items are allowed to correlate with each other.

In a Spanish validation of the PGIS-II with 313 Argentine adolescents, Schönfeld & Mesurado (2020) conducted confirmatory factor analyses with unweighted least squares, obtaining good model fit with GFI = .95. However, the authors chose to eliminate items 11 ("I know when I have to make a change in myself") and 12 ("I look for ways to grow as a person") since the AMOS statistical program suggested elimination to improve

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fit. By eliminating item 12, the Using Resources factor was left with only two items and thus under-identified. Factors with two items lead to measurement problems as they have more parameters to estimate than known parameters, and therefore have negative degrees of freedom. Authors did not perform a possible correction for two-item factors, fixing factor loadings of both items to assume tau equivalence and maintain the number of parameters for a just-identified model (Little, 2013). This prevents proper estimation of the fit of the selected model.

The present study aimed to evaluate fit of the theoretical PGIS-II model in its Spanish translation in Paraguay through confirmatory factor analyses with data collected in a Paraguayan sample. CFAs compared models performed in the original validation by Robitschek et al. (2012) whose four-factor model obtained good fit in Argentina (Schönfeld & Mesurado, 2020), and in the Brazilian validation by Pinto Pizarro Freitas et al. (2018). Argentina and Brazil, countries sharing borders with Paraguay, are two Latin American cultures in which this scale has currently been validated. The objective is framed within a trend towards the validation of constructs and scales derived from positive psychology in the Latin American context, which allows the evaluation of the paradigm within the region (Meier & Oros, 2019).

In addition, we sought to collect data about validity evidence based on relationships with other variables of the PGIS-II with respect to the Hope and Satisfaction with Life constructs. Direct and moderate correlation indices are expected, since the instruments assess interrelated but not identical constructs. Hope, like PGI, is future-oriented and presents a positive and optimistic outlook; however, both constructs differ in that hope refers to the pursuit of goals in general, and not so much to personal growth as such, although people who present high PGI are likely to have greater facility in setting goals, finding ways to achieve those goals, and feeling they have agency or capacity for achieving those goals (Shorey et al., 2007). Satisfaction with life is related to PGI because it is a perspective of acceptance of life conditions, which focuses on the positive side (Pascual del Río & Cantero López, 2015).

Method

Participants
219 university students from public and private universities in the city of Asunción, Paraguay, participated. The ages of the participants ranged from 18 to 47 years of age ($M = 23.24$; $SD = 3.743$). Table 1 shows sociodemographic characteristics of the sample.

Table 1

Sociodemographic characteristics of the sample (N = 219)

| Feature	*n*	%
Sex*		
Female	163	
Male		
Marital Status		
Single		
Living as a couple		
Married		
Number of children*		
None		87
One		5
Two	5	

Note. These variables present missing data in the system.

       Sampling was combined: 164 of the cases were assessed in person by non-probability sampling; another 55 cases were assessed by snowball sampling with an online questionnaire, in order to access a diversity of university students, representing different majors and universities in the country. No significant differences existed in PGI scales between participants who accessed through one or the other data collection strategy.

       Power analyses were performed a priori to detect the minimum number of participants in order to achieve adequate power for the use of the indicator RMSEA (Preacher & Coffman, 2006). For the number of parameters to be estimated in each planned confirmatory factor analysis according to their degrees of freedom (*df*), assuming a null RMSEA of 0.05 and alternative RMSEA of 0.08, $\alpha = .05$ and desired power of 0.80, the minimum numbers of participants were between $n = 128$ for 104 *df* and $n = 133$ for 98 *df* corresponding to the *df* of each planned analysis (Preacher & Coffman, 2006).

       Power curves were also performed for the use of RMSEA (Schoemann et al., 2010), taking again the same estimated values of 104 and 98 *df*, in order to estimate the power that would be achieved as the number of participants increased. Figure 1 presents the power curve for 98 *df*, which is the initial four-factor model corresponding to the theoretical model of the PGIS-II. The figure shows that after $n = 200$, power exceeds the value of 0.95, and there would be little gain in statistical power by including a larger number of participants. Furthermore, following De Jonckere and Rosseel (2022) it is currently possible to perform structural equation modeling with small (< 100) or very small (< 50) samples by means of parameter estimation adjustments, avoiding model non-convergence. Therefore, the number of participants is adequate for a small model with few parameters such as the one presented in this study.

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Figure 1
RMSEA power curve for 98 df for the PGIS-II
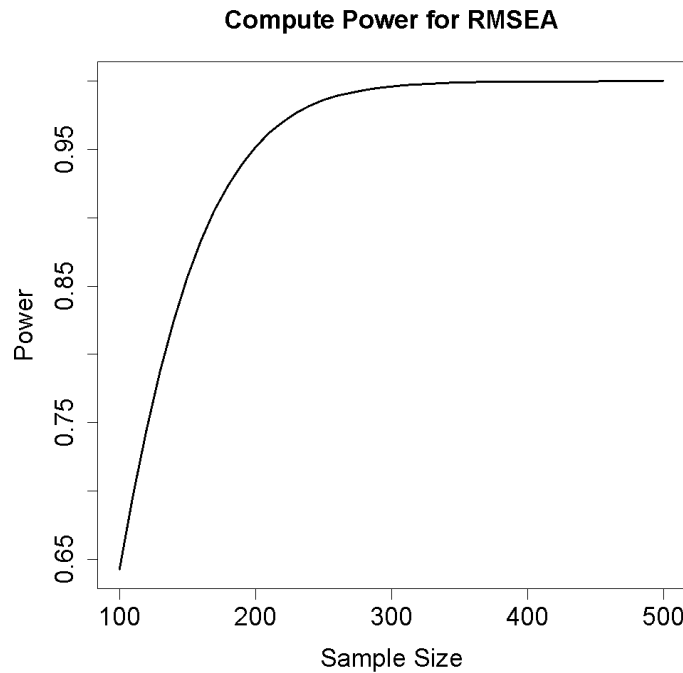
Source. Schoemann et al. (2010).

Instruments

Sociodemographic questionnaire. A questionnaire was designed with questions on age, sex, name of the university, career, years in the career, whether they were the first member of their family to attend university, degree of confidence in their choice of career, parents' occupation, level of education, marital status, number of children, and who had chosen the career they were studying (i.e., whether they or their parents had chosen it).

Personal Growth Initiative Scale-II (Robitschek et al., 2012). It consists of 16 items with 6-point Likert-type response options, from 0 (*Strongly disagree*) to 5 (*Strongly agree*). The items are arranged in four scales: Intentional Behavior, Using Resources, Planfulness, and Readiness for Change. A higher score on each scale indicates a greater presence of the personal growth initiative component.

Translation of the original instrument was done through a translation and back-translation procedure, carried out by three professionals who were fluent in Spanish and English, as well as knowledgeable in psychology. The first of these persons translated the original English into Spanish. The second back-translated from Spanish to English. Finally, a third person compared the three versions to determine if the meaning of statements was preserved. The result of this process is showed on Table 2, with the final version of the items in Spanish.

Table 2

PGIS-II items in Spanish

Items	Statement
1	Me pongo metas realistas para lo que quiero cambiar en mí.
2	Puedo darme cuenta cuando estoy listo/a para hacer cambios específicos en mí.
3	Sé cómo hacer un plan realista para cambiarme a mí mismo/a.
4	Tomo cada oportunidad de crecimiento, así como aparece.
5	Cuando trato de cambiar, hago un plan realista para mi crecimiento personal.
6	Pido ayuda cuando trato de cambiar.
7	Trabajo activamente para mejorar.
8	Descubro qué es lo que debo cambiar en mí mismo/a.
9	Estoy constantemente tratando de crecer como persona.
10	Sé cómo ponerme metas realistas para realizar cambios en mí mismo/a.
11	Sé cuándo debo hacer un cambio en mi persona.
12	Uso recursos cuando trato de crecer.
13	Conozco pasos que debo dar para realizar cambios intencionales en mi persona.
14	Busco ayuda de manera activa cuando trato de cambiar.
15	Busco oportunidades para crecer como persona.
16	Sé cuándo es tiempo de cambiar cosas específicas en mi persona.

Adult Hope Scale (Vuyk & Codas, 2019). This scale is an adaptation of the Adult Hope Scale originally developed by Snyder et al. (1991). It is composed of 12 items with 8-point Likert-type response options, 1(*Definitely false*) 8 (*Definitely true*). This scale was translated into Spanish and adapted to the Paraguayan context by Vuyk and Codas (2019). The instrument is composed of two subscales: Agency, which evaluates the motivation that a person presents towards the achievement of a goal (ω_s = .96), and Pathways, which evaluates the paths that a person visualizes towards the achievement of that goal (ω_s = . 86); it also yields an overall Hope score (ω = .95). It was previously used in studies with the PGIS-II in English (Shorey et al., 2007) where it was found that they are similar but not equal constructs, since each one contributes a part of the variance to the prediction of other factors such as psychological well-being, stress and optimism.

Satisfaction with Life Scale (Atienza et al., 2000). This scale is the Spanish version of the Satisfaction with Life Scale, originally developed by Pavot and Diener (1993) and widely used in the literature as an ultra-brief measure of utility. In the validation by Atienza et al. (2000) it presented an excellent fit of GFI = .98 and good reliability with α = .84. It is composed of five items aimed at evaluating the degree of satisfaction of the person with the conditions of his or her own life. It is answered using a seven-point Likert-type scale from 1 (*Strongly agree*) to 7 (*Strongly disagree*). It was previously used in studies with the PGIS-II in the validation of Pinto Pizarro Freitas et al. (2018) in Portuguese, finding moderate and consistent correlations with all dimensions of PGI.

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Procedure

The present study has the approval of the ethics committee of the University of Kansas. Before participating in the study, students read carefully and signed the informed consent forms in both online and paper-and-pencil versions.

The online version of the questionnaire was designed in Qualtrics, and subsequently shared on Facebook and Twitter. In-person application of the instruments was carried out in classrooms during class time. In each case, professors in charge authorized to use the last 30 minutes of the class. After responding to questionnaires, students left them on a designated table and then left the classroom. Participants were informed that participation was free and voluntary, that there would be no penalties for not participating and that no incentives would be offered for completing the questionnaires.

Planned Analyses

Confirmatory factor analyses with maximum likelihood estimation were performed using *R* software with the lavaan package (Rosseel, 2012) to compare the different models evaluated in the literature according to their goodness of fit, using robust maximum likelihood estimation due to the ordinal nature of the data. To fix the factor variance, the scale setting method (Little, 2013) was used. The interpretation of the goodness-of-fit of the models used in this study was based on the suggestions of Little (2013) and Hu and Bentler (1999) that speak of an acceptable fit with $CFI > .90$, $RMSEA < .08$, and $SRMR < .11$, and an excellent fit with $CFI > .95$, $RMSEA < .05$, and $SRMR < .06$. As there were several models to compare, the conventions for fit indices previously mentioned were taken into account.

Using measurement models that incorporate several indicators for each construct allows correcting measurement error, since they can separate reliable indicators from those that are not (Little, 2013). Thus, confirmatory factor analysis proves to be a superior method to exploratory factor analysis or simple subscale calculations because of its lower bias and greater generalizability.

Results

First, we present the descriptive statistics for ease of interpretation. Table 3 shows means and standard deviations for each of the items.

Table 3

Descriptive Indicators by Item of the PGIS-II

Item	*M*	*SD*
Item 1	3.92	0.94
Item 2	3.80	0.96
Item 3	3.52	1.00
Item 4	3.77	1.03
Item 5	3.64	0.98
Item 6	3.30	1.36
Item 7	3.82	1.03
Item 8	3.89	0.94
Item 9	4.35	0.82
Item 10	3.78	0.90
Item 11	3.71	0.94
Item 12	3.81	0.88
Item 13	3.59	0.9
Item 14	3.27	1.23
Item 15	4.09	0.84
Item 16	3.87	0.87

Table 4 shows the correlations between theoretical subscales of the PGIS-II and the subscales chosen for validity evidence according to relationships with other variables. For the hope subscales, coefficients vary between weak correlations ($r = .19$) and high correlations ($r = .66$). For satisfaction with life, only a weak significant correlation appears with the Planfulness subscale, which differs from the results obtained by Pinto Pizarro Freitas et al. (2018).

Table 4

Correlations between Hope, Satisfaction with Life and Personal Growth Initiative

	Agency	Media	Hope - Total	Satisfaction with Life
Readiness for Change	.41**	.25**	.38**	.05
Planfulness	.59**	.41**	.57**	.22***
Using Resources	.31**	.19**	.30**	.07
Intentional Behavior	.66**	.47**	.64**	.13

Note. *p < .05, **p < .01, ***p < .001. Values refer to Pearson's correlation coefficient.

Table 5 presents the covariances and correlations between each subscale of the PGIS-II, while Table 6 presents the covariances and correlations between each item of the PGIS-II.

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Table 5

Covariances and Correlations between Theoretical Subscales of the PGIS-II

Scales	Readiness for Change	Planfulness	Using Resources	Intentional Behavior
Readiness for Change	7.097	.926	.872	.707
Planfulness	*.693*	12.362	.727	.757
Using Resources	*.423*	*.347*	7.973	.798
Intentional Behavior	*.538*	*.607*	*.449*	8.376

Notes. Covariances are above the diagonal. Correlations are below the diagonal, in bold italics.

The skewness and kurtosis values are -.54 and .67 respectively for Planfulness; -.28 and -.29 for Readiness for Change; -.67 and .66 for Intentional Behavior; and -.54 and .05 for Using Resources. Taking into account conventions on skewness and kurtosis for latent variable analyses, variables have a normal distribution and therefore the maximum likelihood estimates are adequate.

Results of confirmatory factor analyses were evaluated according to the criteria outlined in Hu and Bentler (1999) and Little (2013). Since model 1 with four factors did not show adequate fit, its modification indexes were reviewed to explore possible sources of error and thus verify deviations from the theoretical model of the PGIS-II in the Paraguayan sample. It should be emphasized that this procedure was not solely performed to improve fit, since such improvement is circumstantial and arbitrary, and does not correct for factor misspecification (Marsh et al., 2013). Several pairs of items had high residual covariances, with the highest pairs being items 2-3 and 6-14 as in the study by Pinto Pizarro Freitas et al. (2018). Item 12 loaded on all factors causing problems in the structure of the instrument, as in the study by Schönfeld and Mesurado (2020).

Replicating the previously mentioned studies, we proceeded to allow for covariance between the pair of items 6-14, and then between items 2-3 and 6-14, as they did Pinto Pizarro Freitas et al. (2018). Additionally, item 12 was eliminated and then items 11 and 12, as Schönfeld and Mesurado (2020) did; but with tau equivalence correction for the Using Resource scale which was left with only two items, for which factor loadings were fixed (Little, 2013). The compared models and their fit indices appear in Table 7.

Table 6

Covariances and Correlations between PGIS-II Reactants

Reagents	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.881	.442	.347	.249	.428	.148	.377	.181	.259	.377	.290	.214	.237	.164	.275	.341
2	*.488*	.927	.535	.259	.364	.250	.402	.199	.226	.363	.307	.261	.250	.230	.248	.351
3	*.373*	*.560*	.983	.354	.499	.084	.379	.247	.119	.451	.369	.260	.382	.133	.199	.326
4	*.263*	*.265*	*.347*	1.065	.413	.243	.584	.206	.323	.371	.210	.261	.348	.273	.345	.211
5	*.465*	*.384*	*.512*	*.408*	.954	.276	.441	.209	.255	.443	.255	.232	.339	.344	.299	.325
6	*.116*	*.190*	*.062*	*.172*	*.206*	1.864	.426	.162	.157	.079	.301	.325	.234	1.212	.260	.150
7	*.391*	*.406*	*.371*	*.549*	*.437*	*.304*	1.057	.341	.403	.417	.293	.402	.404	.411	.452	.307
8	*.206*	*.220*	*.265*	*.213*	*.228*	*.126*	*.354*	.879	.314	.232	.289	.233	.323	.251	.247	.305
9	*.338*	*.287*	*.147*	*.383*	*.319*	*.141*	*.483*	*.411*	.665	.289	.202	.297	.279	.228	.330	.221
10	*.449*	*.422*	*.508*	*.402*	*.505*	*.065*	*.454*	*.277*	*.397*	.799	.352	.315	.438	.211	.207	.405
11	*.330*	*.341*	*.398*	*.219*	*.278*	*.236*	*.304*	*.330*	*.265*	*.420*	.876	.426	.325	.333	.228	.371
12	*.261*	*.312*	*.301*	*.290*	*.271*	*.272*	*.448*	*.286*	*.418*	*.402*	*.523*	.760	.409	.352	.275	.289
13	*.281*	*.288*	*.429*	*.374*	*.386*	*.190*	*.438*	*.383*	*.380*	*.546*	*.386*	*.520*	.809	.378	.257	.363
14	*.142*	*.193*	*.109*	*.215*	*.284*	*.721*	*.325*	*.217*	*.227*	*.192*	*.289*	*.326*	*.341*	1.518	.318	.280
15	*.348*	*.306*	*.238*	*.398*	*.362*	*.227*	*.524*	*.314*	*.481*	*.275*	*.288*	*.373*	*.340*	*.307*	.708	.255
16	*.418*	*.419*	*.377*	*.235*	*.382*	*.126*	*.342*	*.374*	*.311*	*.520*	*.455*	*.383*	*.463*	*.261*	*.349*	.759

Notes. Covariances are above and above the diagonal. Correlations are below the diagonal, in bold italics.

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Table 7
*Goodness-of-Fit Indices of Confirmatory Factor Analyses of the PGIS-II*

Model	df	χ^2	AIC	BIC	IFC	ΔCFI	RMSEA	SRMR
1	98	294.606*	8524.515	8707.029	.851		0.096	0.095
1.1	97	232.382*	8464.290	8650.185	.898	.047	0.08	0.057
1.2	96	210.431*	8444.339	8633.614	.913	.015	0.074	0.054
1.3	85	193.219*	7997.118	8166.113	.910		0.077	0.055
1.4	72	177.737*	7481.215	7640.070	.906	-.004	0.082	0.056
2	104	448.079*	8665.988	8828.223	.740		0.123	0.081
2.1	103	309.511*	8529.420	8695.035	.844	.104	0.096	0.066
2.2	102	284.609*	8506.518	8675.513	.862	.018	0.091	0.063
3	100	304.836*	8530.744	8706.499	.845		0.097	0.099
3.1	99	244.667*	8472.576	8651.710	.890	.045	0.082	0.059
3.2	98	219.633*	8449.542	8632.056	.908	.018	0.076	0.056

Note. * $p < .001$. Original four-factor model. 1.1: Model 1 allows for the covariance of the pairs of items 6-14. 1.2: Model 1 allows for the covariance of pairs of items 2-3 and 6-14. 1.3: Model 1 without item 12. 1.4: Model 1 without items 11 and 12. 2: One-factor model. 2.1: Model 2 allows for the covariance of the pairs of items 6-14. 2.2: Model 2 allows for the covariance of the pairs of items 2-3 and 6-14. 3: Four-factor model with a second-order factor. 3.1: Model 3 allows for the covariance of the pairs of items 6-14. 3.2: Model 3 allows for the covariance of the pairs of items 2-3 and 6-14.

The single-factor models showed a worse fit than the four-factor and four-factor models with a second-order factor. The model that demonstrates better fit is 1.2, the four-factor model that allows for covariance of items 2-3 and 6-14, which replicates the study of Pinto Pizarro Freitas et al. (2018). Therefore, it was selected for interpretation of results. The items that compose each factor with their respective factor loadings are observed in Figure 2.

Figure 2
Four-factor model corresponding to the theoretical model of the PGIS-II, with correlated residuals according to Pinto Pizarro Freitas et al. (2018)
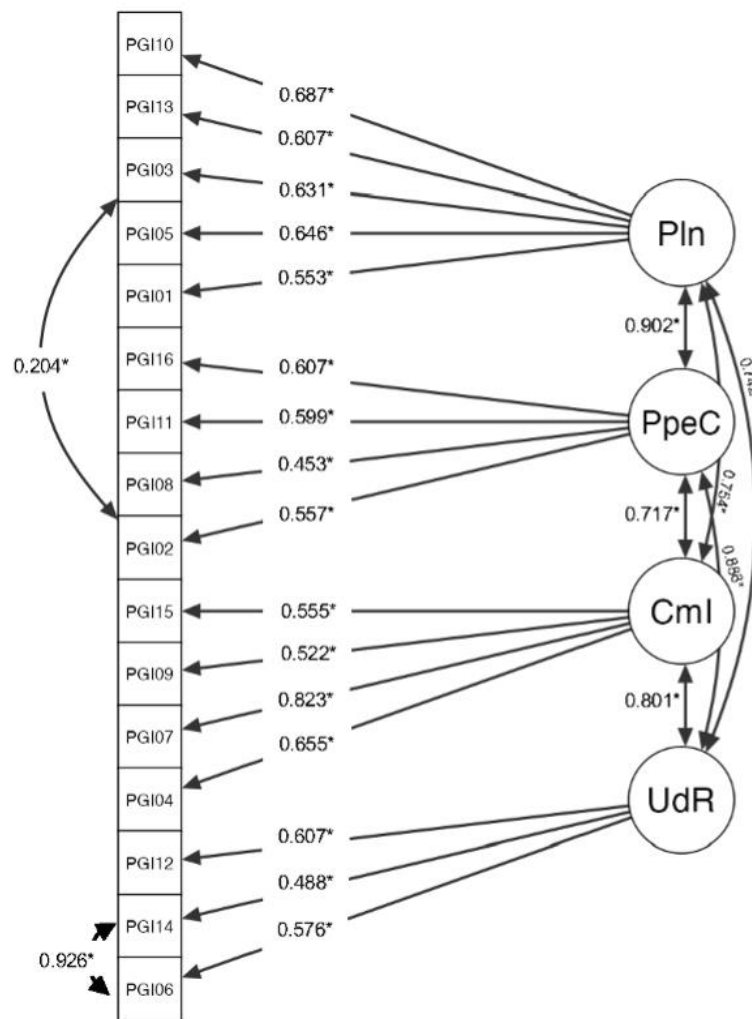
Notes. The figure presents factor loadings and interfactor correlations. Values with * are significant at a *p* < .001 level. Pln: Planfulness; PpeC: Readiness for Change; CmI: Intentional Behavior; UdR: Using Resources. PGI01 to PGI16 represent items of the PGIS-II.

      Subscales of the PGIS-II present acceptable reliability, with McDonald's Omega above .70; ω_s = .80 for Planfulness, ω_s = .70 for Readiness for Change, ω_s = .78 for Intentional Behavior and ω_s = .75 for Using Resources. Reliability for the total PGIS-II was very good –and higher than for the subscales separately– with ω = .89.

      Finally, the Hammer (2016) calculator was used for the construct replicability index or H-index, obtaining *H* = .65 for Planfulness, *H* = .77 for Readiness for Change, *H* = .58 for Intentional Behavior, and *H* = .79 for Using Resources. As they all fall below the established threshold of .80, the replicability of the construct is considered poor.

Auxiliary Analysis: ESEM
      Due to the difficulty in obtaining an optimal fit in the theoretical structure and the low replicability of the PGIS-II, we proceeded to perform auxiliary analyses in an exploratory manner. When instruments have many correlated residuals and cross-

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loadings between factors, due to the nature of the constructs and the way in which the instruments are created, they present worse fit indices in CFAs or need multiple modifications to achieve good fit. This need for modifications leads to data-driven models, which goes against the fundamental premise of CFA of theory-based models (Gignac et al., 2007). For this reason, exploratory structural equation modeling (ESEM) was introduced as a theory-based alternative that can complement CFA (Marsh et al., 2013).

ESEM differs from traditional exploratory factor analysis (EFA) in that it incorporates advanced methodological procedures for estimating latent variables used in SEM and CFA that EFA cannot estimate (Morin et al., 2013). Unlike CFA, ESEM is more flexible because it allows managing small cross-loadings for indicators (Morin et al., 2013). For the auxiliary analyses with ESEM, we used the program MPlus 7.1.3 (Muthén & Muthén, 2013) with robust maximum likelihood estimation, Geomin oblique rotation, and four-factor prediction following the theoretical model of Robitschek et al. (2012). Caution to interpret ESEM results is recommended, as it is an exploratory data from the same sample.

When the first analysis was performed with ESEM, the first model presented a residual covariance matrix that was not positive definite, involving item 06 of the Using Resources scale. This item was eliminated to rerun the model; this second analysis did not achieve convergence as it exceeded the number of iterations expected, and also presented a non-positive residual covariance matrix involving item 03. By also eliminating item 03, the four-factor model in ESEM presented good fit; $\chi^2(41, N = 219) = 53.812$; CFI = .982, AIC = 7312.771, BIC = 7576.403, SRMR = .024, RMSEA = .038 (.000 - .064). Table 8 shows the distribution of items in ESEM factors, which do not correspond exactly to the theoretical structure of Robitschek et al. (2012), presenting slight deviations from it.

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Table 8
Factorial loading of the Four Factor ESEM

Item	Preparing for Change	Intentional Behavior	Planfulness	Use of Resources
1	<u>.651</u>	.062	*.087*	-.031
2	**.512**	.064	.105	.076
4	-.021	**.580**	.324	-.102
5	.322	.224	**.330**	-.069
7	.151	**.624**	.176	.073
8	*.067*	.180	.055	<u>.331</u>
9	.092	**.351**	.090	.158
10	.162	-.020	**.673**	.039
11	*.208*	-.089	.115	<u>.521</u>
12	-.008	.142	.126	**.507**
13	-.076	.127	**.424**	<u>.343</u>
14	.011	.282	.010	**.420**
15	.205	**.465**	-.117	.179
16	**.306**	-.069	.225	<u>.302</u>

Note. Factor loadings of the main factor with $p < .05$ in bold. Expected factor loadings that did not load based on $p > .05$ in italics. High factor loadings with $p < .05$ that do not correspond to the main factor are underlined. Factors appear in the order in which they were extracted.

While in general the factor loadings are as expected, there are certain deviations. The Intentional Behavior factor, which in the theoretical model comprises items 4, 7, 9 and 15, is perfectly replicated with good factor loadings. The Planfulness factor, which in the theoretical model comprises items 1, 3, 5, 10 and 13, includes three of the five expected items with good factor loadings, while item 1 loads on another factor and item 3 had to be eliminated for model convergence. The factor Readiness for Change, which in the theoretical model comprises items 2, 8, 11 and 16, includes two of the four expected items with good factor loadings, includes item 11 with low factor loadings, does not include item 8 and also loads on item 1, which in theory corresponds to Planfulness. The Using Resources factor, which in the theoretical model includes items 6, 12 and 14, includes two expected items with good factor loadings and we eliminated item 6 for causing errors in the model. In addition, in this last factor items load that correspond to Readiness for Change, such as 8, 11 and 16, and item 13 corresponding to Planfulness.

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Discussion and Conclusion

The present study aimed to validate the factor structure of a Spanish translation of the Personal Growth Initiative Scale (Robitschek et al., 2012). Although the scale was originally created with four factors composing the construct in mind, studies have shown controversies about this factor structure (Borowa et al., 2018; Weigold et al., 2018).

Data from the present study indicate that the four-factor structure holds up in this version of the Spanish-speaking questionnaire as the best interpretive model, but that it has difficulties in structure specification according to the results of planned CFAs and the auxiliary ESEM conducted in this study. Structural complications include pairs of non-independent items, items that load on more than one scale, and items that do not correspond to the scale to which they theoretically belong.

The pair composed by item 2 ("I can realize when I am ready to make specific changes in myself") and item 3 ("I know how to make a realistic plan to change myself"), as well as the pair composed by item 6 ("I ask for help when I try to change") and item 14 ("I actively seek help when I try to change") are not independent of each other. This phenomenon had already been reported in a Portuguese translation of the same scale (Pinto Pizarro Freitas et al., 2018). Items 2 and 3 belong to two different subscales, Readiness for Change and Planfulness respectively. Both subscales belong to the cognitive component described by Weigold et al. (2018). Items 6 and 14 belong to the same subscale, Using Resources, belonging to the behavioral component (Weigold et al., 2018).

In this study, within the cognitive component, item 1 ("I set realistic goals for what I want to change in myself") is grouped with items of the Readiness for Change factor, instead of being grouped with items of the Planfulness factor. It could be inferred that the fact of developing the plan that leads to change, and the fact of knowing when it is time to execute such change, are not as differentiated in Latin American cultures as in other cultures.

The lack of independence between the specific items mentioned above, or the item loading on a different scale, does not seem to represent difficulties when interpreting the results of the PGIS-II, when referring to the same component (cognitive or behavioral) or to the same subscale depending on the pair of items in question.

The correlation indices between the PGIS-II and the Hope and Satisfaction with Life scales conform to expectations based on previous research: that they are related but not necessarily equivalent constructs (Shorey et al., 2007). Both the total Hope scale and the Agency and Means subscales show moderate to strong correlations with the Intentional Behavior and Planfulness subscales. Agency measures personal motivation and belief in goal attainment, and Means measures the multiple pathways that the person can envision for reaching that goal (Snyder et al., 1991), which relate to seeking opportunities for change that are seen in the intentional behavior of personal growth and setting realistic goals that the person sees as achievable. They relate to a lesser extent with slight to moderate correlations with the subscales of Readiness for Change and Using Resources that refer to the detection of moments and areas to improve and to the instrumental help requested for the effect. In this study, the degree of satisfaction with the person's current life was only slightly related to the Planfulness subscale, indicating in a certain way that the most satisfied people are those who know how to set realistic goals and vice versa. This differs from Pinto Pizarro Freitas et al. (2018) in whose study satisfaction with one's own life related to the overall PGI.

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The data indicate that the scale shows acceptable fit among students in the city of Asunción, so we recommend its use in this population for clinical and research purposes. As an initiative towards self-improvement in different areas, and as a predictor of locus of self-esteem (Robitschek, 1998) and a predictor of locus of control (Keefer et al., 2018) PGI can be measured to determine the extent to which a patient can benefit from a therapeutic process (Borowa et al., 2018). Patients with low PGI scores could be understood as going through initial stages of therapeutic change, so they may benefit from a therapeutic process (Prochaska & DiClemente, 2005) as well as benefit from the motivational interviewing technique (Rollnick et al., 2008).

On the other hand, low rates of PGI in clinical contexts may function as predictors of maladjustment to future stressful events (Shigemoto et al., 2016). This means that a patient could benefit from primary interventions that the therapist designs, regardless of whether the patient does not meet nosological criteria at the time of psychological consultation.

Limitations and Suggestions for Future Research

The main limitation of this study is the convenience sample, taking data from university students from educational institutions in the city of Asunción. This could imply that the scale does not adjust equally well to other segments of the Paraguayan population, taking into account that Paraguay is a multicultural country. Cultural differences exist even within the city of Asunción. It should also be noted that Paraguayans who have access to university education are a minority. Therefore, they may not represent the general population. However, these data could represent the population that generally seeks clinical psychological support and possesses sufficient reading comprehension to complete psychological instruments.

It would be important to evaluate the utility of the scale in different contexts, populations, and situations; for example, community settings rather than clinical settings, persons with Spanish as a second language, persons with reading comprehension difficulties using the PGIS-II as an interview guide, etc. Thus, additional utility to that suggested in this article could be established for the PGIS-II in clinical practice.

Additionally, it is necessary to continue refining the factor structure of the PGI so that measurements can better reflect the construct. Problems inherent to its measurement in Latin American contexts indicate that the optimal structure for explaining the functioning of the PGI in these populations has not yet been found. In the absence of similar instruments, it would be possible to use this version of the PGIS-II but taking into account the limitations in its structure.

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