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# Translation and Content Validation of the Generative Altruism Scale - Brazilian Version

## Traducción y Validación de Contenido de la Escala de Altruismo Generativo - Versión Brasileña

## Tradução e Validação de Conteúdo da Escala de Altruísmo Generalizado - Versão Brasileira

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### ABSTRACT

Altruism is a behavior directed towards helping another person at a certain cost to the benefactor. The present study aimed to translate and semantically adapt the Generative Altruism Scale for Brazil. This study had the help of two multidisciplinary panels: one formed by a specialist in Developmental Psychology responsible for assisting in semantic adjustments, and another composed of four specialists in Social

and Positive Psychology who evaluated the items regarding the adequacy of the construct, clarity and similarity. The Content Validity Coefficient was used to evaluate the items according to the scores of these judges. All 10 final items presented satisfactory coefficients. It is believed that this mediated has been translated properly, having semantic equivalence with the original scale.

**Keywords:** Adaptation; scale; test validity; altruism

## RESUMEN

El altruismo consiste en un comportamiento orientado a ayudar a otra persona, con un determinado costo para el benefactor. El presente estudio tuvo como objetivo traducir y adaptar semánticamente la Escala Generativa de Altruismo para Brasil. Este estudio contó con la ayuda de dos paneles multidisciplinares: uno formado por una especialista de Psicología del Desarrollo responsable por las adecuaciones semánticas, y otro compuesto por cuatro especialistas en

Psicología Social y Positiva que evaluaron los ítems en cuanto a la adecuación al constructo, claridad y similitud. Se utilizó el Coeficiente de Validez de Contenido para evaluar los ítems según las puntuaciones de estos jueces. Los 10 elementos finales presentaron resultados satisfactorios. Esto permite considerar que la escala fue adecuadamente traducida y presenta equivalencia semántica con la escala original.

**Palabras clave:** Adaptación; escala; validacion de test; altruismo

## RESUMO

O altruísmo trata-se de um comportamento direcionado para ajudar outra pessoa a certo custo para o benfeitor. O presente estudo teve como objetivo traduzir e adaptar semanticamente a Escala de Altruísmo Generalizado para o Brasil. Este estudo contou com a ajuda de dois painéis multidisciplinares: um formado por uma especialista de Psicologia do Desenvolvimento responsável por auxiliar nas adequações semânticas, e outro composto por quatro

especialistas em Psicologia Social e Positiva que avaliaram os itens quanto à adequação ao construto, clareza e similaridade. Utilizou-se do Coeficiente de Validade de Conteúdo para avaliar os itens segundo os escores destes juízes. Todos os 10 itens finais apresentaram coeficientes satisfatórios. Confia-se que esta medida foi traduzida adequadamente, possuindo equivalência semântica com a escala original.

**Palavras-chave:** Adaptação; escala; validade do teste; altruísmo

The study of human essence, whether good or bad, has earned the attention of theoreticians and philosophers throughout the ages. Thus, in the face of the growing demand for social responsibility, investigation of behavioral motivations that favor third parties seems to make sense (Gouveia, Santos, Athayde, & Gusmão, 2014). This is especially true when taking into account that avoidance or refusal to help in

situations of need translates into grave social problems, those which are being observed currently even in the most varied societies around the world (Stürmer & Siem, 2017). In this context of behavior based on concern for the well-being of others, pro-social behaviors stand out for being like any behavior that aims to help others, yet without necessarily bringing immediate return to the benefactor (Paulus, 2014).

Given its rarity and/or atypicality, altruism as a type of behavior gains special prominence among other forms of pro-social behavior (Batson & Powell, 2003). This is a complex construct that has been treated by different perspectives. On the one respect it is argued that altruistic behaviors are performed for future gain, in other approaches it is assumed that human beings are genuinely altruistic, and this behavior can be performed even if any incentive is suppressed (Andreoni, Rao, & Trachtman, 2017). The latter is the perspective adopted in this paper. This construction can generally be understood as behavior directed at helping one or more people (Büssing, Kerksieck, Günther, & Baumann, 2013), and that costs time, money, energy, or even sacrificing one's own needs and desires for the good of the other.

In fact, altruism has proven to be a very important construct because of its presumable relevance in explaining behaviors such as blood donation (Fox, Himawan, & France, 2017; Kiss et al., 2015). Further, altruism is related to cooperation (Pessôa, Seidl-de-Moura, Mendes, Carvalho, & Stobäus, 2015), empathy (Cameron, Spring, & Todd, 2017), and behaviors and attitudes involving equity, sharing, moral sense and even compassion (Büssing et al., 2013).

Understanding the motivations of pro-social behavior contributes greatly to the understanding of human nature, its limitations, and abilities (Gouveia et al., 2014). Valid and reliable parameters are necessary to measure this construct, with translation and semantic adaptation processes being the much needed initial steps. In this sense, bringing to light potential instruments to measure altruism becomes pertinent.

Various instruments have been proposed to measure altruism in adulthood and although some studies make use of experiments based on Game Theory (Bekkers, 2007), measurement is mostly done using self-reporting instruments (Figueredo, 2007). Among stages of human development, measurement of this construct in childhood gains special emphasis considering that this phase is characterized by practice and refinement of skills related to social interaction (Geary, 2002). Initial linkages serve as parameters where patterns are forged and assumption of a basic role in formation of the adult personality occurs (Garrido, Santelices, Pierrehumbert, & Armijo, 2009). This stage of development was given focus in the present study.

In the scenario of construct measurement, we highlight the *Generative Altruism Scale* (GAS; Büssing et al., 2013), which has gained prominence in the international literature. For example, a study developed by Kafaar (2015) used this measure for factors that facilitated and hindered participation in a program whose objective was to reduce the number of HIV cases in South Africa. Though GAS is gaining space in the world context, in Brazil no studies have been found employing it. This encouraged the development of our study. From the above, it was intended to adapt and make a semantically translate the GAS for a Brazilian context, which is therefore an initial approach to the process of cross-cultural adaptation. A priori should be described.

### **Generative Altruism Scale**

The scale was originally elaborated in English by Büssing et al. (2013) in a German context. At the time, the authors proposed the GAS, originally composed of seven items that contemplate concrete helpful activities (e.g. *I help others even when I will not receive something in return*). This instrument presents a four-point *Likert* type response scale ranging from 0 (Strongly Disagree) to 4 (Strongly Agree), which measures the intensity of the respective behaviors or attitudes.

Psychometric properties were evaluated with a sample of 871 individuals recruited from a high school. The authors verified the underlying structure by means of Exploratory Factor Analysis (EFA). Initially the scale had 9 items, such that the EFA emerged as a two-factor structure, the first factor compiled seven items and explained 32% of the variance, while the second factor with two items, explained 18% of the variance. However, Confirmatory Factor Analysis (CFA) indicated a better fit for single factor structuring (CFI = .90; SRMR = .048), and presenting an internal consistency index (Cronbach's  $\alpha$ ) of .93.

In view of its psychometric properties, the GAS presents itself as a relevant instrument in altruistic behavior studies, helping to know its correlates. Although such instruments that measure altruistic behavior are important, measures aimed at evaluating altruism in the Brazilian context are scarce, especially those aimed at altruistic behavior in childhood and adolescence. In order to fill this gap, this paper aims to adapt and make the semantically translate of GAS, considering its Content Validity Coefficient (CVC).

Content assessment is an essential procedure in the development and validation of psychological instruments. Although it is configured as an exploratory and initial stage for the adaptation of psychometric measures, its implementation is indispensable, as it allows ensuring that each element of the set of items is relevant and representative of the investigated psychological construct. There is evidence that content validation has not been sufficiently explored or satisfactorily addressed in many publications (Noronha, Primi, & Alchieri, 2004), and it's been possible to find in the literature researches that address aspects related to construct validity without first highlighting the parameters obtained in content analysis. This is a fault that may compromise the quality of the measure's adaptation to its language, content and suitability to the new cultural context (Streiner, Norman, & Cairney, 2015). Although content validation doesn't eliminate the need to verify other validity parameters, it was decided for the

present article to emphasize the process of translation and semantic adaptation of GAS to the Brazilian context, as can be seen below.

## Method

### Participants

A specialist in Developmental Psychology evaluating the *semantic appropriateness* for the target audience (children), and four specialists in Social Psychology and Positive Psychology with recognized knowledge in the mentioned areas evaluated the measured items, the parameters: *adequacy to the construct*, *adequacy/clarity to the target population*, and *similarity to the original version*.

### Instrument

With the authors' authorization, the original English version of GAS was used as the instrument. Two versions were translated from English into Portuguese to obtain the first version of the measure in Brazilian Portuguese. The back-translation of this first version was made taking into account the target audience, this version used as the reference when requesting the opinion of the original authors regarding whether to keep (or not) the semantics of each item. And finally, a third version was formulated, taking into account the suggestions of the authors of the original, and giving shape to the final version, which was reviewed by the specialists as to the aforementioned aspects.

### Procedure

A priori, we requested authorization for use of the measure from the authors. Specifically, an email was sent to the first GAS author, Professor Arndt Büssing of the University of Witten/Herdecke, Herdecke, Germany, by digital means on May 15, 2017.

That development of this research followed the methodological procedures recommended by Borsa, Damásio and Bandeira (2012): a) Translation of the instrument from the source language to the target language; b) Synthesis of translated versions; c) Evaluation of the synthesis by expert judges; d) Evaluation of the instrument by the target audience; e) Reverse translation; and f) Pilot study.

The translations were carried out by two Brazilian translators with proven English proficiency. Based on these translations, a second version of the instrument was written in Portuguese, where the best Portuguese version was prepared in terms of linguistic adequacy in relation to the target audience. Subsequently, a specialist in Developmental Psychology was consulted concerning the appropriateness of each item in terms of language adjustments for children.

Once this was completed, this latest version was translated back into English, and the original author of the scale was contacted to verify that even with language modifications resulting from adaptation to the target audience, no latent content had been lost. In addition, we asked for suggestions to improve the instrument; suggestions were promptly and kindly given.

Subsequently, with the changes suggested by the author, four specialists in Social and Positive Psychology, all proficient in Portuguese and English, were contacted to evaluate the items for the following parameters: *similarity to the original version*, *adequacy to the construct*, and *clarity/suitability for the target population*. The first was similarity in relation to the original for the latent content of each item modified. The second, *adequacy to the construct* involves each item's coherence to the construct in question. And finally, the last parameter questions the clarity and appropriateness of the language for the target population, which in the case would be children who are at the end of childhood (8-11 years). To evaluate the parameters already mentioned, we used the CVC, as proposed by Filgueiras et al. (2015).



The four specialists evaluated the parameters using a five-point Likert scale ranging from 1 (Totally inadequate) to 5 (Totally suitable). Thus, by invitation to participate in the evaluation committee, the perspective adopted by the construct in question was delimited, as well as the understanding of each of the parameters (as done previously).

### Data analysis

The data were analyzed using Excel software, and to evaluate the Content Validity of the measure, inferential analyses were performed; the Content Validity Ratio (CVR) and the Content Validity Coefficient (CVC), where  $(CVC) \geq .80$ , as established in the literature (Filgueiras et al., 2015; Hernández-Nieto, 2002; Pieri, Pires, Filgueiras, & Oliva, 2016).

### Results

The final version of the Generative Altruism Scale was renamed Generalized Altruism Scale (in Portuguese the *Escala de Altruísmo Generalizado*). The GAS, at the suggestion of the original author, received three extra items specifically related to engagement in voluntary activities. As to semantic adequacy for the Brazilian context, only two items (20%) required adjustment (Items 1 and 6).

Item 1 had the term “benefit” in its original content, but it was considered that this would leave doubts, being a far-fetched term to be used with children. Item 6 presented the expression “the common good”, which, like the previous item, was considered as inadequate language for children, and adding semantic difficulty to the item. In the Brazilian Portuguese version, the group of experts suggested replacing the words and expressions respectively with “something” and “good of all”, ensuring greater clarity.

The other items were maintained according to their translations, undergoing minimal adjustments in order to achieve the best possible Brazilian Portuguese version. In addition, as suggested by the original author, items 8 to 10 were added. It was

important to include items that had behavioral/attitudinal content expressing genuine unreasoned helping behavior, as well as items which would present a certain cost to the benefactor.

The general CVC, which took into account the three evaluated parameters: *similarity to the original version*, *adequacy to the construct*, and *clarity/suitability for the target population* presented an index of .95. With respect to the *adequacy to the construct* parameter, the  $CVC_t$  was .96. As for the *clarity/suitability for the target population* parameter, the  $CVC_t$  was also .96. Finally, regarding the *similarity to the original version*, the  $CVC_t$  was .91. Table 1, presents the items resulting from the back-translation, as well as the  $CVC_i$  value for each item, and also each parameter as measured by the four specialists. Thus, Table 1 presents the final version of the instrument in portuguese and in english, including the modifications indicated by the group of specialists ( $n = 4$ ).

Table 1

*Content Validity Coefficient Indices for each item and parameter evaluated*

English Version	Portuguese Version (Adapted)	CVC		
		Adequacy	Clarity	Similarity
1. I help others even when there is no direct benefit to me.	Eu ajudo aos outros mesmo quando não vou receber algo em troca.	1.0	1.0	.9
2. If someone I do not know asks me for help, I will help he/she as soon as possible.	Se alguém que não conheço me pede ajuda, eu vou ajudá-lo o mais rápido possível.	1.0	1.0	1.0
3. When I see someone suffering, I try to find ways to help him/her.	Quando eu vejo alguém sofrendo tento achar maneiras de ajudá-lo.	.9	1.0	.8

4. When I see someone in need of help, I try to reduce his/her difficulty or help him/her in what need.	Quando vejo alguém precisando de ajuda, tento diminuir sua dificuldade ou ajudá-lo no que precisar.	1.0	1.0	.9
5. If someone I do not know intends to borrow something which is really important to me, I will lend it to him/her nonetheless.	Se alguém que eu não conheço me pede emprestado algo que é importante para mim, eu empresto mesmo assim.	1.0	1.0	1.0
6. I can relinquish my material goods in favour of the common good.	Eu posso abrir mão das minhas coisas em favor do bem de todos.	1.0	.9	.9
7. When I see someone in need, I ask him/her how I can help.	Quando eu vejo alguém precisando de ajuda, eu pergunto como posso ajudá-lo.	1.0	1.0	1.8.0
8. If you find someone with difficulty performing a task I can use, I will still be drawn to my tasks.	Se vejo alguém com dificuldade de realizar uma tarefa vou ajudá-lo, ainda que eu me atrase em minhas tarefas.	1.0	1.0	.9
9. I help take care of someone with the flu, even if I can get sick.	Eu ajudo a cuidar de alguém gripado, mesmo que eu possa ficar doente.	.9	1.0	.9
10. I help take care of a younger child, even if I'm busy.	Eu ajudo a cuidar de uma criança mais nova, mesmo que eu esteja ocupado.	1.0	.9	.9

Note. CVC = Content Validity Coefficient

As can be seen in the table, only item 3 presented a marginally acceptable CVC<sub>i</sub>, .80. Thus, to build a more appropriate final version of the GAS it was important to take into account the suggestions made by the experts. Although this version presented this problem in CVC<sub>i</sub> regarding back-translation, we were confident as to having overcome this difficulty after the modifications had been made. Taking into account the

coefficients presented by each item, it is believed that the GAS as translated and adapted compiles appropriate and sufficient parameters for use in the Brazilian context.

## Discussion

The objective of this study was to translate the GAS from English to Brazilian Portuguese, semantically adapting it to this context. We sought to provide to Brazilian psychological literature an initial approach to the assessment of altruistic performance in the context of children and adolescents. The findings point to evidence that is relevant to the adequacy of the translation and semantic adequacy of the instrument. In this sense, it should be noted that the evaluated aspects – *similarity to the original version, adequacy to the construct, and clarity/suitability for the target population* – presented a  $CVC_i$  equal to or greater than the cutoff point of .80. In fact, in view of the validity of its content the indices show that the instrument is both coherent and adequate semantically (Pieri et al., 2016).

As to item 3, where the  $CVC_i$  index of .80 was found, though being the lowest of the items is still within the adequacy parameters found in the literature (Hernández-Nieto, 2002). Regarding items 1 and 6, which required word modifications to guarantee clarity, it was decided to maintain the changes taking into account that they had achieved adequate  $CVC_i$  indexes for all of the aspects investigated.

According to Filgueiras et al. (2015), a CVC value lower than .80 indicates that the judges/specialists did not agree on the adaptation of an item. Although this did not occur for any of the items of the aforementioned scale, the results of item 3 should be considered, since it presented the lowest index of the scale, was marginally adequate, suggesting that it may not have achieved a semantic content equivalent to the original instrument (Büssing et al., 2013).

It is needs to be noted out that the author of the scale, Professor Büssing, suggested insertion of items related to engagement in voluntary behaviors, such that three items

were added to the Brazilian version. In the elaboration of these items, it was important to ensure that they expressed helping behaviors/attitudes, with no expectation of returns, as well as suggesting a definite cost to the benefactor. We believe that these items are in accordance with the delimitations of altruism foreseen in the literature (Andreoni et al., 2017). It should also be noted that the evaluation of these items as to *similarity to the original version*, was performed by assigning to them the average scale score, a procedure adopted in different studies where the presence of “missings” was verified, as confirmed by Little and Rubin (2002).

In view of the foregoing, it should be pointed out that inadequately adapted instruments can lead to different research problems, and thus can require consideration of a series of procedures and cultural idiosyncrasies (Borsa et al., 2012). The amendments incorporated into the final version of the GAS were considered relevant and accepted with the consent and analysis of experts, demonstrating that their suggestions were instrumental in the process of instrument adaptation.

Adaptation and validation of instrument content are initial steps for its use in contexts that differ from the original. These are basic processes for subsequent verification of the psychometric parameters of an instrument, such that these were taken as the objectives of this research. For this, two multidisciplinary panels were used: one formed by a specialist in Developmental Psychology, responsible for assisting in semantic adjustments, and one composed of four specialists in Social and Positive Psychology who evaluated the items regarding *adequacy to the construct*, *clarity* and *similarity*. From the data it can be verified that all 10 final items of the scale presented CVCs equal to or greater than .80, as prescribed in the literature (Pieri et al., 2016).

Based on recent national and international publications (e.g, Filgueiras et al., 2015; Santos, Contenças, Santos, Silva, & Antunes, 2017), it is generally agreed that the use of translation techniques and adaptation of other countries is an important procedure that enables cross-cultural comparisons and studies (International Test Commission,

2017). As was done in this study, these techniques must follow strictly, respecting the social contexts of the countries of origin and destination. In this sense, it can be said that the concern with the terms used in the GAS items was one of the solid bases of this work.

This research adds important contributions to the measurement of altruism, but it is not free of limitations. For example, although it can be said that this instrument presents an adequate CVC, to the future studies with GAS are recommended: a) Pilot study; b) Verification of construct validity [exploratory and confirmatory]; and c) Verification of concurrent and discriminant validity (see Dancey, Reidy, & Rowe, 2017). The present work therefore intended to open the way for researchers to work on the psychometric properties of GAS, a potentially reliable instrument to be used in Brazilian studies.

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### Author's contribution statement

HMM, AF and CVF contributed to the design and implementation of the research, HMM to the analysis of the results and the writing of the manuscript with the support of all authors. All authors discussed the results and contributed to the final manuscript.

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