

Cultural Translation and Validation of the Stigmatizing Situations Inventory-Brief into European Portuguese

Inês Rego de Figueiredo^{a, b, c, d} Lara Palmeira^e José Silva-Nunes^{a, b, d, f}

^aMultidisciplinary Unit of Bariatric and Metabolic Surgery, Curry Cabral Hospital, Centro Clínico Académico de Lisboa, Unidade Local de Saúde São José, Lisbon, Portugal; ^bHealth and Technology Research Center, Escola Superior de Tecnologia da Saúde de Lisboa, Lisbon, Portugal; ^cEgas Moniz School of Health and Science, Almada, Portugal; ^dNOVA Medical School/Faculdade de Ciências Médicas, New University of Lisbon, Lisbon, Portugal; ^eInstituto de Psicologia Portuguesa (I2P), Porto, Portugal; ^fDepartment of Endocrinology, Diabetes, and Metabolism, Curry Cabral Hospital, Unidade Local de Saúde São José, Lisbon, Portugal

Keywords

Stigma · Discrimination · Weight bias · Psychometric properties · Translations

Abstract

Introduction: Stigma is a tendency to exclude people's perceived difference by society. It can be external or discrimination and internal or self-stigma. There are a variety of tools to assess weight stigma. However, there was a lack of a tool in European Portuguese to assess external stigma. Therefore, the aim of this study was to perform translation, validation, and cultural adaptation of the Stigmatizing Situations Inventory-Brief (SSI-B) questionnaire into European Portuguese. **Methods:** A cross-sectional study was performed by completion of two questionnaires by patients with obesity followed at a multidisciplinary obesity treatment clinic: SSI-B questionnaire and the validated translated Portuguese version of the Everyday Discrimination Scale. Direct translation followed reviewing, back-translation, comparison, and pilot testing were performed. The retest was done 1 month after the baseline. The following psychometric properties were assessed: convergent validity between SSI-B and the Everyday Discrimination Scale, internal consistency, and reproducibility

between test and retest. **Results:** A total of 175 patients were included, with a mean age of 47 ± 11 years old and a mean BMI of 43 ± 6 kg/m². The mean stigma scores were 21 ± 18 on the SSI-B and 9 ± 9 on the Everyday Discrimination Scale. Regarding the psychometric properties, convergent validity yielded a Spearman's r coefficient of 0.727, the Cronbach's alpha coefficient for internal consistency was 0.88, and reproducibility produced a Spearman's r coefficient of 0.7 and an intraclass correlation coefficient of 0.699. **Conclusion:** This translation demonstrates acceptable psychometric properties, supporting its future application in clinical practice in Portugal.

© 2025 The Author(s).
Published by S. Karger AG, Basel

Introduction

Stigma is defined as a tendency to marginalize or exclude people perceived as different by the society [1]. It comprehends two dimensions: external and internal [2]. External stigma consists of the experience of discrimination and can be explicit/social/public or implicit/structural. Internalized stigma or self-stigma reflects experiences of shame and negative self-evaluations [2, 3].

Stigmatizing Situations Inventory Brief (SSI-B)
Breve Inventário de Situações Estigmatizantes (B-ISE) (traduzido)

Instruções:

Abaixo encontra-se uma lista de situações com que pessoas se deparam por causa do seu peso. Por favor, indique se, e com que frequência (com uso da escala de 0 a 9), cada uma das situações aconteceu consigo.

0	1	2	3	4	5	6	7	8	9
Nunca	Pelo menos uma vez na vida	Várias vezes na vida	Cerca de uma vez por ano	Várias vezes por ano	Cerca de uma vez por mês	Várias vezes por mês	Cerca de uma vez por semana	Várias vezes por semana	Diariamente

1. Ser individualizado/a em criança por professor ou enfermeira da escola, devido ao seu peso	0 1 2 3 4 5 6 7 8 9
2. Ser olhado/a fixamente em público	0 1 2 3 4 5 6 7 8 9
3. Crianças a fazer comentários em voz alta sobre o seu peso a outros	0 1 2 3 4 5 6 7 8 9
4. Um médico ter recomendado uma dieta, mesmo se o motivo da consulta não fosse para discutir perda de peso	0 1 2 3 4 5 6 7 8 9
5. Um(a) parceiro/a romântico explorou-o/a, porque assumiu que estava “desesperado” e aguentava	0 1 2 3 4 5 6 7 8 9
6. Ouvir comentários rudes sobre si em público	0 1 2 3 4 5 6 7 8 9
7. Não ser contratado/a devido ao seu peso, forma ou tamanho	0 1 2 3 4 5 6 7 8 9
8. Membros da família sentirem-se embaraçados ou com vergonha de si	0 1 2 3 4 5 6 7 8 9
9. As pessoas assumirem que come muito ou tem episódios de ingestão alimentar compulsiva porque tem excesso de peso	0 1 2 3 4 5 6 7 8 9
10. Olharem fixamente ou ser assediado por passageiros de autocarro por “ocupar muito espaço”	0 1 2 3 4 5 6 7 8 9

Fig. 1. Stigmatizing Situations Inventory-Brief questionnaire – translated.

Stigma typology comprehends three dimensions: (1) abominations of the body – negative attributions to physical appearance (in which weight stigma is included); (2) blemishes of individual character – negative attributions to

personality traits; (3) tribal stigma – negative attributions toward certain races/religions [1]. Therefore, stigma affects a variety of people in a very different set of possible situations. One type of stigma that is highly prevalent in our society is

weight stigma, in which attitudes, beliefs, and judgment of individuals are directed toward people with big bodies [4]. Its prevalence is comparable to racial discrimination [5].

Stigma can be assessed using a variety of instruments and scales. These can be categorized by stigma dimension (internal or external) and may be general or specific to a particular type of stigma (e.g., mental health, racial, weight). Regarding weight stigma, in European Portuguese, it is available the “Weight Self-Stigma Questionnaire,” which has been translated by Palmeira et al. [2, 6]. However, there is no questionnaire available to assess external weight stigma, or weight discrimination translated into European Portuguese. Therefore, the aim of this study was to adapt and translate into European Portuguese the Stigmatizing Situations Inventory-Brief (SSI-B) questionnaire [7].

Methods

Study Design

The current cross-sectional study was carried out at a multidisciplinary obesity treatment clinic in a Portuguese Central Hospital in Lisbon. Recruitment lasted from January to June 2023. All patients admitted to the multidisciplinary obesity treatment clinic during that period were invited to participate. Exclusion criteria were age younger than 18 years old and European Portuguese language not being their mother language.

Patients willing to participate would sign an informed consent form and fill out both questionnaires (which are further explained in the questionnaires section) while in the waiting room, with the option to clarify doubts during the medical appointment. The questionnaires were then sent by mail to be filled again by the participants (retest) after 1 month.

Questionnaires

During this study two questionnaires were delivered to the study population: the SSI-B and the validated translated Portuguese version of the Everyday Discrimination Scale (Escala de Discriminação Quotidiana) [8]. The Stigmatizing Situations Inventory is one of the most common questionnaires used to assess weight stigma by asking the frequency of experiences with weight stigma in different domains [9]. This original version was troublesome for being too long (50 items); so a shorter version was developed to improve efficiency assessing weight stigma [7]. The brief version has 10 questions, which score from never (0 points) to daily (9 points).

The Everyday Discrimination Scale is a standard discrimination questionnaire which was developed in 1995 in

the USA (Everyday Discrimination Scale; Williams, Yu, Jackson, & Anderson, 1997). Its items try to capture small unfair and routine acts of discrimination. It has been mostly used in racial and gender discrimination studies. It was translated to Portuguese by Freitas et al. [8] in 2015. This version has 9 questions, varying from never (0) to almost every day [5].

Translation and Validation

The international model for questionnaire translation was followed ([10]):

1. Forward/initial translation: the original version of SSI-B was translated into Portuguese by a bilingual healthcare professional.
2. Reviewing: a team reviewed the translated and original versions for some semantic and conceptual changes, reaching a consensus.
3. Back-translation: a second bilingual healthcare professional, blinded to the original version, performed back-translation.
4. Comparison: the original and back-translated versions were compared to optimize the translated version.
5. Pilot testing: the translated version was delivered to 20 participants. After filling out the questionnaire, a short interview was performed in order to collect suggestions and to search for doubtful issues in the translated questionnaire.

The final version of the translated questionnaire is shown in Figure 1.

Assessment of Psychometric Properties

Assessment of psychometric properties (field validation) was carried out after administration of the resulting version of the SSI-B to patients with obesity. The psychometric properties of interest were as follows:

1. Validity, assessed through convergent validity by examining the correlation between the SSI-B and the Everyday Discrimination Scale.
2. Reliability, evaluated by determining internal consistency using Cronbach’s alpha (α) coefficient.
3. Reproducibility (temporal), assessed by calculating the intraclass correlation coefficient (ICC) between test and retest.

Ethical Issues

The project had the approval of the Unidade Local de Saúde São José Ethics Committee (reference number INV 451 – entitled “Estigma e discriminação na obesidade – O impacto no tratamento”). All patients signed an informed consent form, and their data were anonymized.

Table 1. Participants' characteristics regarding demographics, anthropometrics, obesity-related comorbidities, eating patterns, and motivation for weight loss ($n = 175$)

Demographics	$n = 175$
Age – mean (SD), years	47 (11)
Gender - N (%)	
Female	126 (72%)
Male	49 (28%)
Anthropometrics – mean (SD)	
Weight, kg	117 (21)
Height, cm	1.64 (0.08)
BMI, kg/m ²	43 (6)
Obesity classes - N (%)	
I	9 (5%)
II	42 (24%)
III	124 (71%)
Total fat mass, %	47 (7.7)
Waist circumference, cm	123 (13)
Obesity-related comorbidities - N (%)	
High blood pressure	89 (51%)
Type 2 diabetes mellitus	36 (21%)
Dyslipidemia	69 (39%)
Obstructive sleep apnea	45 (26%)
Osteoarticular disease	91 (52%)
Anxiety/depression	88 (50%)
Venous insufficiency	50 (29%)
Liver steatosis	51 (29%)
Eating patterns - N (%)	
Sweet eater	72 (41%)
Volume eater	64 (36%)
Snacking	25 (14%)
Night eating	12 (7%)
Nibbling/picking	7 (4%)
Emotional eating	73 (42%)
Compulsion	13 (7%)
Binge eating	3 (2%)
Weight loss motivation - N (%)	
Self-image issues	54 (31%)
Health issues	87 (50%)
Functionality issues	56 (32%)
Quality of life issues	49 (28%)

Statistical Analysis

Categorical variables were expressed as absolute values (percentages), and continuous variables were expressed as mean \pm standard deviation. This study used Spearman's rank correlation coefficient (r), Cronbach's alpha coefficient, and ICC.

Spearman's r ranges from -1 to 1 , with values greater than 0.6 and 0.8 , indicating a good and a very good correlation, respectively. Cronbach's alpha is a reliability coefficient and ranges between 0 and 1 , with higher

Table 2. Psychometric properties of the translated SSI-B

Psychometric properties	
Converging validity	
Spearman's coefficient	0.727
p value	<0.001
Internal consistency	
Cronbach's alpha coefficient	0.88
Reproducibility	
ICC	0.699
Spearman's coefficient	0.7
p value	<0.01

values >0.9 indicating excellent internal consistency. ICC ranges between 0 and 1 , with values above 0.6 and 0.75 indicating good or excellent correlations, respectively.

Convergent validity was measured by assessing whether the SSI-B correlated well with the Everyday Discrimination Scale, using Spearman's r . Reliability was tested through internal consistency using Cronbach's alpha. Reproducibility was assessed using the ICC between test and retest, along with Spearman's correlation coefficient (r). Statistical analysis was performed using STATA (StataCorp. Stata statistical software: release 14. College Station, TX: StataCorp LP). A p value <0.05 was considered statistically significant.

Results

A total of 175 patients were included. Female patients comprised 72% of the sample, and the mean age was 47 ± 11 years. The mean BMI was 43 ± 6 kg/m², with the majority of participants (71%) presenting with class III obesity. Anthropometric data showed mean total fat mass of $47 \pm 7.7\%$ and a waist circumference of 123 ± 13 cm (Table 1).

Considering obesity-related comorbidities, the most frequent were as follows: osteoarticular disease (52%), high blood pressure (51%), and anxiety/depression (50%). Regarding eating patterns, patients often showed emotional eating (42%) and volume eating (36%). Regarding weight loss motivation, it is frequently associated with the desire to improve health issues (50%) (Table 1).

Scores for stigma were on average 21 ± 18 for the SSI-B and 9 ± 9 for the Everyday Discrimination Scale. Regarding the psychometric properties, convergent validity was assessed through correlation between the

SSI-B and Everyday Discrimination Scale, with a Spearman's r coefficient of 0.727. Therefore, the questionnaire was considered as valid (Table 2).

Reliability was assessed by internal consistency using Cronbach's alpha coefficient, which was 0.88 (Table 2). Lastly, reproducibility over time was calculated between test and retest in 58 participants, yielding a Spearman's r coefficient of 0.7 and an ICC of 0.699 (Table 2).

Discussion

The SSI-B questionnaire is a useful tool for identifying weight-stigmatizing experiences in a time-efficient manner compared to its full 50-item version [7]. This tool is of particular interest for capturing weight stigma in clinical practice when time is limited [7]. The aim of this study was to achieve a cross-cultural translation and validation of the SSI-B questionnaire into European Portuguese. Our translated version showed acceptable psychometric properties (validity, reliability, and reproducibility). The convergent validity of 0.727 was higher than that reported for the SSI-B in several samples using various scales, including the Weight Bias Internalization Scale ($r = 0.25\text{--}0.44$) [7].

Reliability, or internal consistency, was lower than that reported in several original SSI-B samples, where Cronbach's alpha ranged from 0.90 to 0.98 [7]. However, it was high enough for the translated version to be considered reliable.

Finally, reproducibility, as assessed by test-retest, yielded an ICC value of 0.699, which is considered moderate [11]. This remains the main limitation of our psychometric evaluation, as an ICC above 0.75 is considered good and above 0.9, optimal [11].

As a study strength, we highlight the sample size and the overall demographic and clinical characteristics that make it representative of patients with obesity seeking for medical treatment. However, this study has several limitations. First, as previously referred, the reproducibility, although being moderate, is far from the optimal range. This could be due to two different reasons. First, the test and retest were not conducted in the same manner: the initial test was administered in person at the clinic, whereas the retest was completed by the patient at home (it was sent by mail approximately 1 month after the initial test). Other hypothesis for the differences in test and retest responses might be related to stigma volatility. Because stigma, in particular external stigma, is based upon experiences of discrimination, it can vary over time. Therefore, differences in the experiences reported at the time of the test and retest must be taken into account.

Second, the choice of the Everyday Discrimination Scale for comparison and internal validity might not have been the best tool. However, the requirement for a generalized discrimination assessment tool that was already translated into European Portuguese significantly limited the available options.

Third, our sample was restricted to patients with obesity seeking for medical or surgical treatment. It has been extensively demonstrated that patients that suffer most weight bias and stigma often avoid healthcare professionals and healthcare facilities [12, 13]. Therefore, we might have missed an important group of patients with obesity who experience stigma differently.

To conclude, we believe that the need to assess weight external stigma in the Portuguese patients with obesity frankly benefits from this cross-cultural translation and validation of the SSI-B questionnaire into European Portuguese. It will allow Portuguese healthcare professionals to easily assess weight discrimination in patients with obesity as well as its impact on the overall patient's health.

Statement of Ethics

This study protocol was reviewed and approved by Comissão ética para a Saúde, Unidade Local de Saúde São José, approval No. CES1382_2023_INV451. All participants signed an informed consent form upon study inclusion.

Conflict of Interest Statement

Prof. José Silva-Nunes was a member of the journal's Editorial Board at the time of submission. The remaining authors have no conflicts of interest to declare.

Funding Sources

This study was not supported by any sponsor or funder.

Author Contributions

Study design: I.R.F., L.P., and J.S.-N. Data collection and data analysis: I.R.F. Draft manuscript writing: I.R.F. and L.P. Manuscript revision: J.S.-N.

Data Availability Statement

The data that support the findings of this study are not publicly available due to being a private database that may contain information that could compromise the privacy of research participants but are available from the corresponding author (I.R.F.) (contact details: ines.r.figueiredo@ulssjose.min-saude.pt) upon reasonable request.

References

- 1 Gencoglu C, Sahin E, Kaya L. Attachment styles as predictors of stigma tendency in adults. *Edupej*. 2016;5(1):7–21. <https://doi.org/10.12973/edupij.2016.51.1>
- 2 Palmeira L, Cunha M, Pinto-Gouveia J. The weight of weight self-stigma in unhealthy eating behaviours: the mediator role of weight-related experiential avoidance. *Eat Weight Disord*. 2018;23(6):785–96. <https://doi.org/10.1007/s40519-018-0540-z>
- 3 Bradstreet S, Dodd A, Jones S. Internalised stigma in mental health: an investigation of the role of attachment style. *Psychiatry Res*. 2018;270:1001–9. <https://doi.org/10.1016/j.psychres.2018.03.047>
- 4 Vartanian LR, Porter AM. Weight stigma and eating behavior: a review of the literature. *Appetite*. 2016;102:3–14. <https://doi.org/10.1016/j.appet.2016.01.034>
- 5 Puhl RM, Heuer CA. The stigma of obesity: a review and update. *Obesity*. 2009;17(5):941–64. <https://doi.org/10.1038/oby.2008.636>
- 6 Lillis J, Luoma JB, Levin ME, Hayes SC. Measuring weight self-stigma: the weight self-stigma questionnaire. *Obesity*. 2010;18(5):971–6. <https://doi.org/10.1038/oby.2009.353>
- 7 Vartanian LR. Development and validation of a brief version of the stigmatizing situations inventory. *Obes Sci Pract*. 2015;1(2):119–25. <https://doi.org/10.1002/osp4.11>
- 8 Freitas DF, Coimbra S, Marturano EM, Fontaine AM. Adaptação da Escala de Discriminação Quotidiana para Jovens Portugueses. *Psicol Reflex Crit*. 2015;28(4):708–17. <https://doi.org/10.1590/1678-7153.201528408>
- 9 Myers A, Rosen JC. Obesity stigmatization and coping: relation to mental health symptoms, body image, and self-esteem. *Int J Obes Relat Metab Disord*. 1999;23(3):221–30. <https://doi.org/10.1038/sj.ijo.0800765>
- 10 Brislin RW. Back-translation for cross-cultural research. *Cult Res*. 1970;1(3):185–216. <https://doi.org/10.1177/135910457000100301>
- 11 Koo TK, Li MY, et al. A guide of selecting and reporting intraclass correlation coefficients for reliability research. *J Chiropr Med*. 2016;15:155–163. <https://doi.org/10.1016/j.jcm.2016.02.012>
- 12 Fruh SM, Graves RJ, Hauff C, Williams SG, Hall HR, et al. Weight Bias and Stigma: Impact on Health. *Nurs Clin North Am*. 2021;56(4):479–93. <https://doi.org/10.1016/j.cnur.2021.07.001>
- 13 Flint Sw. Obesity Stigma: Prevalence and impact in Healthcare. *B J Obes*. 2015. <https://www.researchgate.net/publication/276918977>