

## Cultural and reliable adaptation of the Reproductive Autonomy Scale for women in Brazil

Adaptação cultural e confiabilidade da Reproductive Autonomy Scale para mulheres no Brasil

Adaptación cultural y confiabilidad de la *Reproductive Autonomy Scale* para mujeres de Brasil

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### Keywords

Reproductive health; Personal autonomy; Women's health; Validation studies; Reproducibility of results; Translating

### Descritores

Saúde reprodutiva; Autonomia pessoal; Saúde da mulher; Estudos de validação; Reprodutibilidade dos testes; Tradução

### Descriptores

Salud reproductiva; Autonomía personal; Salud de la mujer; Estudios de validación; Reproducibilidad de los resultados; Traducción

### Submitted

October 19, 2018

### Accepted

April 1, 2019

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### DOI

<http://dx.doi.org/10.1590/1982-0194201900041>



### Abstract

**Objective:** To translate and adapt the Reproductive Autonomy Scale to the Brazilian culture and evaluate the reliability of the adapted version.

**Methods:** Methodological study, in which were followed the steps of translation, consensus among judges, back-translation, semantic validation and pre-test. Reliability was checked through internal consistency (Cronbach's alpha) and temporal stability by using the test-retest (intraclass correlation coefficient). The scale was applied to a sample of 140 women, of which 70 were rural workers of the São Francisco Valley and 70 were *quilombola* communities of the Identidade Sertão Produtivo Territory, in Brazil.

**Results:** The Reproductive Autonomy Scale was appropriately adapted for the Brazilian culture. The overall Cronbach's alpha of the scale was 0.76, which indicates adequate internal consistency. The reproducibility analysis showed no significant difference in test-retest scores and the ICC value=0.93 for the whole scale indicated excellent reproducibility.

**Conclusion:** The Reproductive Autonomy Scale is appropriate and reliable to evaluate the reproductive autonomy of Brazilian women.

### Resumo

**Objetivo:** Traduzir e adaptar a *Reproductive Autonomy Scale* para a cultura brasileira e avaliar a confiabilidade da versão adaptada.

**Métodos:** Estudo metodológico, que seguiu as etapas de tradução, consenso entre juízas, retro-tradução, validação semântica e pré-teste. A confiabilidade foi verificada de acordo com a consistência interna (alfa de Cronbach) e a estabilidade temporal usando o teste-reteste (coeficiente de correlação intraclasse). A escala foi aplicada em uma amostra de 140 mulheres, sendo 70 trabalhadoras rurais do Vale do São Francisco e 70 quilombolas do Território de Identidade Sertão Produtivo, no Brasil.

**Resultados:** A *Reproductive Autonomy Scale* foi adequadamente adaptada para cultura brasileira. O alfa de Cronbach da escala como um todo foi de 0,76, indicando consistência interna adequada. A análise da reprodutibilidade mostrou que não houve diferença significativa nos escores teste-reteste e o valor do ICC=0,93 para toda a escala indicou excelente reprodutibilidade.

**Conclusão:** A *Reproductive Autonomy Scale* é apropriada e confiável para avaliar a autonomia reprodutiva de mulheres brasileiras.

### Resumen

**Objetivo:** Traducir y adaptar la *Reproductive Autonomy Scale* a la cultura brasileña y evaluar la confiabilidad de la versión adaptada.

**Métodos:** Estudio metodológico que siguió las etapas de traducción, consenso entre juezas, retrotraducción, validación semántica y prueba piloto. La confiabilidad fue verificada de acuerdo con la consistencia interna (alfa de Cronbach) y la estabilidad temporal con la utilización del test-retest (coeficiente de correlación intraclase). La escala fue aplicada en una muestra de 140 mujeres, de las cuales 70 eran trabajadoras rurales de Vale do São Francisco y 70 quilombolas del Territorio de Identidad Sertão Produtivo, en Brasil.

**Resultados:** La *Reproductive Autonomy Scale* fue correctamente adaptada a la cultura brasileña. El alfa de Cronbach de la escala como un todo fue de 0,76, lo que indica consistencia interna adecuada. El análisis de reprodutibilidad demostró que no hubo diferencias significativas en las puntuaciones test-retest y el valor del ICC=0,93 de toda la escala indicó excelente reprodutibilidad.

**Conclusión:** La *Reproductive Autonomy Scale* es apropiada y confiable para evaluar la autonomía reproductiva de mujeres brasileñas.

### How to cite:

Fernandes ET, Dias AC, Ferreira SL, Marques GC, Pereira CO. Adaptação cultural e confiabilidade da *Reproductive Autonomy Scale* para mulheres no Brasil. *Acta Paul Enferm.* 2019;32(3):298-304.

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Conflicts of interest: nothing to declare.

## Introduction

Reproductive autonomy is women's ability to freely decide on issues related to the best time to get pregnant, interrupt an unwanted pregnancy or continue it, and use contraceptives that best suit their needs. In practice, this freedom of choice is often hampered by multifactorial issues about women's reality in society, which ultimately devalues or diminishes the power to exercise the freedom of reproductive decision.<sup>(1,2)</sup>

Among the factors that may interfere in women's reproductive decisions, the following sociodemographic conditions stand out: age, region, education, religion, marital status, color/race, and daily work.<sup>(2-4)</sup>

The patriarchal and androcentric culture is still rooted in Brazil nowadays, and a natural privilege of choices is given to men, which denies many women their reproductive autonomy.<sup>(5,6)</sup>

The evaluation of reproductive autonomy in women is a difficult task, because it involves multiple factors and the shortage of valid instruments for measuring this outcome. The Reproductive Autonomy Scale was developed and validated by professors/researchers at the Department of Obstetrics, Gynecology and Reproduction at the University of California, and allows to assess a woman's power to achieve reproductive autonomy.<sup>(7)</sup> This instrument is composed of 14 items, subdivided into three subscales: decision making (questions 1 to 4), absence of coercion (questions 5 to 9) and communication (questions 10 to 14).

The first subscale includes questions about who has the final word in different reproductive situations with three options of answer: my sexual partner (or family member, such as parents or mother-in-law/father-in-law) = 1 point; both me and my sexual partner (or someone in the family, such as parents or mother-in-law/father-in-law) equally = 2 points; Me = 3 points. Questions of the second subscale are related to situations in which women are coerced. The third subscale includes issues related to the possibility of communication between women and their partners (or another person, such as father, mother, mother-in-law/father-in-law) re-

garding sexual relationship and reproductive decisions. For the second and third subscales, responses are of the Likert type: Strongly disagree = 1 point; Disagree = 2 points; Agree = 3 points; Strongly agree = 4 points.<sup>(7)</sup> Since all items in the coercion subscale are theoretically contrary to reproductive autonomy, the scoring of items of this construct must be inverted for calculating the score of absence of coercion.<sup>(7)</sup> For each of the three subscales and for the scale as a whole, is calculated an average score, and higher scores indicate higher levels of reproductive autonomy.<sup>(7)</sup>

Although the international literature has studies focused on reproductive empowerment and its association with sociodemographic and reproductive factors, in the Brazilian scenario, neither this type of research nor studies using validated and specific multidimensional instruments addressing reproductive autonomy were identified.

Although to date, the Reproductive Autonomy Scale has not been translated into other languages, its adaptation to other countries is essential and pertinent. When its psychometric properties were originally evaluated from the validity of dimensional construct, discriminant construct validity and internal consistency, satisfactory results were achieved, which suggests the scale is valid and reliable.<sup>(7)</sup> Thus, the instrument can contribute to understand the reproductive intentions of women from other cultures, provide information that helps to propose sexual and reproductive health interventions addressing reproductive autonomy, and facilitate cross-cultural comparisons.<sup>(7)</sup>

In view of the above, the purpose of this article is to translate and adapt the Reproductive Autonomy Scale for the Brazilian culture and evaluate the reliability of the adapted version.

## Methods

Methodological study initiated after agreement of the main author of the original instrument.<sup>(7)</sup> The Reproductive Autonomy Scale was culturally adapted as proposed by scholars of this procedure<sup>(8)</sup>. There was a change in the back translation

step that was held after the judges committee's opinion<sup>(9)</sup>, but its purpose of showing possible errors of meaning between the original and the adapted version was maintained, which would not occur if the adapted version was later modified by the judges' committee.<sup>(9)</sup>

The study was carried out in two Brazilian states: in the São Francisco Valley, city of Petrolina, state of Pernambuco, and in *Quilombola* communities of the Identidade Sertão Produtivo Territory, state of Bahia.

The signing of the Informed Consent form (IC) and the data collection occurred between November 2017 and January 2018 in private places and at times previously scheduled. For sociodemographic characterization, was used an instrument adapted from the National Health Survey.

The eligibility criteria of participants were: women of reproductive aged over 18 years, rural employees of the Chapéu de Palha Mulher Program, residents of Petrolina-PE, and *quilombolas* living in communities located in the Sertão Produtivo, certified by the Palmares Foundation. For the pre-test of the instrument was selected a convenience sample of 30 women, out of which 15 were rural workers and 15 were *quilombolas*. For the reliability study, the sample size was estimated by considering an acceptable proportion in this step of ten observations for each item of the scale.<sup>(10)</sup> As the scale contains 14 items, the study sample was of 140 women, out of which 70 were rural workers and 70 were *quilombolas*. The selection was by visiting the determined place in the *quilombola* communities, and in visits to the Chapéu de Palha project site in a previously established date and time with local leaders. Participants in the pre-test stage were excluded. In the first contact, women were informed about the purpose of the study, voluntary participation and confidentiality, and the scale was applied individually in a private setting. Out of the 140 women included in the reliability study, were selected 30 participants for temporal stability evaluation (test-retest reproducibility).

The original version of the instrument Reproductive Autonomy Scale was translated into Brazilian Portuguese independently by two bilin-

gual translators and native speakers of the target language (Brazilian Portuguese). The two translations were simultaneously compared between the translators and the researchers, and was produced the synthesis version in Portuguese.

Then, the synthesis version was evaluated by a committee of judges selected for their knowledge on sexual and reproductive rights and gender (teachers of Postgraduate Programs; one was a PhD in Nursing, one a PhD in Social History, one a PhD in Social Sciences, and one a PhD in Education). Each judge received the invitation by e-mail to participate as a committee member. After acceptance, they received the evaluation guidelines, the original version and the synthesis version in Portuguese.

The judges evaluated the translated version from an instrument by including four equivalences and their concepts, namely: semantic, idiomatic, experiential and conceptual.<sup>(11)</sup>

The document was analyzed by the committee individually in about 20 days. The evaluation of each judge was compared with the evaluations of the others, and the items with agreement of less than 90%<sup>(12)</sup> in any equivalence were re-evaluated by the committee.

Then, was performed the pre-test<sup>(13)</sup> with the 30 women of reproductive age selected for this step, in which the objective was to evaluate the comprehension of the scale items.

As this is a low educational level public, the final version of the scale was applied by the researchers instead of being self-applied, as in the original version. After the application, women were asked about their difficulty with choosing the answers in order to identify the comprehension of items. Since participants reported difficulties in understanding, which was also observed by researchers, it was necessary to return to the judges' committee for a new evaluation.

At this stage, no statistical test was performed, only items that respondents considered as difficult to understand were changed in a way not to affect the context.<sup>(14)</sup>

Finally, was written the final version of the instrument in Portuguese, later translated into English by two independent translators, and in a consensual

meeting between the two, was formulated a single version. This version was sent to the main author of the original version for approval, as changes in the instrument content were not part of the judges' committee responsibility.<sup>(8)</sup> After modifications, researchers had a favorable response to the use of the scale, and it was considered as culturally adapted for Brazilian Portuguese.

After the translation and cultural adaptation processes, the new Portuguese version of the scale must present reliability, i.e., the ability to produce the same results at different times and true measurements of items.<sup>(15)</sup>

The internal consistency of the scale final version was evaluated in the sample of 140 women. After this step, the test-retest was performed in the sub-sample of 30 women, and the reapplication of the instrument occurred seven days after the scale was responded for the first time.

Descriptive statistics procedures were used to express the results as absolute and relative frequencies, means and standard deviations or median, and interquartile ranges and minimum and maximum values. When necessary, data normality was tested using the Shapiro-Wilk and Kolmogorov-Smirnov tests. The scale reliability was assessed by internal consistency (Cronbach's alpha) and test-retest reproducibility [Wilcoxon test and intraclass correlation coefficient (ICC)]. As this is a scale with many psychological constructs, Cronbach's alpha values  $\geq 0.7$  were considered adequate with tolerance for values slightly below this cutoff point.<sup>(16)</sup> In relation to the ICC, the following were considered:  $ICC < 0.4$  = poor reproducibility;  $0.4 \leq ICC < 0.75$  = moderate to good reproducibility;  $ICC \geq 0.75$  = excellent reproducibility.<sup>(17)</sup> The significance level adopted was 5% ( $\alpha=0.05$ ) and all analyzes were performed in the IBM SPSS Statistics for Windows (IBM SPSS, 21.0, 2012, Armonk, NY: IBM Corp.).

The study began after the project approval by the Research Ethics Committee of the Universidade do Estado da Bahia and the Universidade Federal do Vale do São Francisco in accordance with Resolution 466/12 of the National Health Council.

## Results

During the pre-test, study participants had greater difficulty with choosing the answers of the second and third subscales because they were Likert-type response options. They often answered yes or no and were again oriented about the response options (strongly disagree, disagree, agree and strongly agree).

There was general agreement of the committee regarding equivalences, but the suggestion for the form of writing the statement that explains the scale was accepted. It was adjusted to be clearer in a structure of topics and without the need for examples. In the decision making subscale, the suggestion was to replace the expression "who has more to say" by "who decides", and replace the terms "strongly disagree" and "strongly agree" by "very much disagree" and "very much agree" in the options of the Likert-type response of the subscales of absence of coercion and communication.

In the reliability study, were included 140 women aged between 18 and 49 years (mean = 31.7 years; standard deviation = 8.3 years), out of which 70 were rural workers (mean = 30.6 years; standard deviation = 7.9 years) and 70 were of the rural *quilombola* community (mean = 32.8 years; standard deviation = 8.6 years). The main sociodemographic characteristics of the sample are described in table 1.

**Table 1.** Distribution of study participants according to sociodemographic characteristics

Variable	Rural workers n(%)	Rural <i>quilombolas</i> n(%)	Total n(%)
Marital status			
Never got married	10(14.3)	15(21.4)	25(17.9)
Married/lives with partner	46(65.7)	51(72.9)	97(69.3)
Separated/divorced/widow	14(20.0)	4(5.7)	18(12.9)
Educational level			
Low	49(70.0)	41(58.6)	90(64.3)
Medium	16(22.9)	14(20.0)	30(21.4)
High	5(7.1)	15(21.4)	20(14.3)
Race			
White	10(14.3)	6(8.6)	16(11.4)
Black	16(22.9)	46(65.7)	62(44.3)
Mixed race/Asian	44(62.9)	18(25.7)	62(44.3)
Religion			
Others	14(20.0)	1(1.4)	15(10.7)
Catholic	56(80.0)	69(98.6)	125(89.3)

The means, standard deviations, minimum and maximum scores of reproductive autonomy are shown in table 2. The mean scores varied between

scales from 2.45 to 3.08; the overall mean score of reproductive autonomy was 2.83.

**Table 2.** Descriptive analysis of each domain of the Reproductive Autonomy Scale - Brazilian version

Factor (subscale)	Mean	Standard deviation	Minimum - maximum
Decision making	2.45	0.43	1.00 - 3.00
Absence of coercion	3.08	0.59	1.60 - 4.00
Communication	2.89	0.51	1.00 - 4.00
Total	2.83	0.35	1.71 - 3.57

The results of the reliability study are presented in table 3. The 14 items of the Reproductive Autonomy Scale - Brazilian version produced a Cronbach's alpha of 0.76, which indicates adequate internal consistency. The absence of coercion subscale obtained the highest internal consistency, followed by the subscales of communication and decision making, all of which reached acceptable Cronbach's alpha values. The analysis of reproducibility showed no significant difference in test-retest scores, and values of the intraclass correlation coefficient indicated excellent reproducibility for the scale as a whole and for the subscales of decision making and absence of coercion. The communication subscale has moderate to good reproducibility.

**Table 3.** Measures of internal consistency and test-retest reproducibility of the Reproductive Autonomy Scale - Brazilian version

Factor (subscale)	Number of items	Cronbach's alpha	Test	Retest	*p-value	ICC (CI95%)
			Median ± IQR	Median ± IQR		
Decision making	04	0.68	2.50 ± 1.00	2.50 ± 0.75	1.000	0.94 (0.89-0.97)
Absence of coercion	05	0.81	3.30 ± 1.60	3.00 ± 1.05	0.645	0.93 (0.86-0.97)
Communication	05	0.75	3.00 ± 0.40	3.00 ± 0.20	0.108	0.59 (0.17-0.79)
Total	14	0.76	3.00 ± 0.79	2.86 ± 0.61	0.931	0.93 (0.85-0.96)

IQR -interquartile range; ICC - intraclass correlation coefficient. \* Wilcoxon test

After analysis, the scale remained with 14 questions, of which four questions in the first subscale, five in the second and five in the third, as shown in annex 1.

## Discussion

The validity allows that instruments of evaluation produced in a certain language and cultural context are used in diverse places for studying the same

phenomenon.<sup>(18)</sup> Cultural adaptation requires a judicious and careful step towards finding equivalence in another culture and language.

All steps proposed for the process of translation, reliability and cultural adaptation of the Reproductive Autonomy Scale were performed in a systematized way and considered satisfactory and judicious.

By understanding the importance of the search for cultural equivalence, conceptual and idiomatic semantics, the judges considered pertinent to preserve the original layout of the scale and change the grammatical structure for improvements in writing.

The pre-test revealed that even with the researchers applying the scale, there were difficulties in understanding some items. After a new evaluation of judges, changes were made in order to keep the original substrate for the Brazilian Portuguese version.

In the first subscale, the scores ranged from 1 to 3, and participants had a mean score of 2.45, a result close to the highest score (3) and to the value of the original study (2.46).<sup>(7)</sup> This shows women's good performance in the study in relation to decision making.

The values of the subscales of absence of coercion and communication ranged from 1 to 4, and women presented mean values of 3.08 and 2.89 respectively, with greater autonomy in the absence of coercion subscale than in the communication subscale. In the original study, the absence of coercion score was 3.57 and the communication score was 3.53.<sup>(7)</sup> These values show greater autonomy of American subjects in these aspects compared to participants of the present study. The socioeconomic profile can determine the differences found, since women in the present study are older, mostly married and of low educational level compared to women in the original study.

Internal consistency is a measure based on the correlation between different items in the same test or between subscales in a longer test.<sup>(19)</sup> It is a way to measure the reliability of an instrument. The final version of the Reproductive Autonomy Scale showed a high Cronbach's alpha coefficient with a value of 0.76, which indicates adequate internal consistency. Values above 0.60 are considered acceptable for preliminary validation studies with the purpose of re-

search.<sup>(12,20)</sup> Note that the Cronbach's alpha value was close to the value of the original scale (0.78).<sup>(7)</sup>

The Cronbach's alpha result of the decision making (0.68) subscale, as well as the ICC result of the communication subscale (0.59) were the lowest values presented in the measurements of internal consistency and analysis of test-retest reliability, respectively. Since this is a scale with many psychological constructs that evaluates the complex dimension of reproductive autonomy, some flexibility is acceptable and values are within acceptable limits in the area of psychometry.<sup>(12,20)</sup> In addition, the Cronbach's alpha value of the decision making subscale was higher than that of the original scale (0.65).<sup>(7)</sup> In relation to the communication subscale, internal consistency (0.75) was also higher than that of the original scale (0.73). In the absence of coercion subscale, the value was somewhat lower (0.81) compared to the original scale (0.82).<sup>(7)</sup> Thus, the internal consistency of the translated and culturally adapted scale is similar to the original scale.

The quality of the adaptation process determines the validity of the instrument for measuring the construct in question. Thus, the instrument chosen for the cultural adaptation must have been well developed and comprehensively validated with satisfactory psychometric properties, and these are characteristics of the original scale. In addition, the adaptation process used in this study was developed according to the methodological criteria recommended in the literature.

## Conclusion

The performance of translation, consensus by judges, back translation and semantic validation allowed the cultural adaptation of the Reproductive Autonomy Scale for Brazilian women. The Reproductive Autonomy Scale - Brazilian version proved reliability for application to rural female workers and rural *quilombola* women by demonstrating acceptable internal consistency and reproducibility. This study showed that the Reproductive Autonomy Scale - Brazilian version is appropriate to evaluate the reproductive autonomy of Brazilian women. However, future studies are necessary

for evaluation of psychometric properties of the Brazilian version.

## Acknowledgements

To FAPESB (Fundação de Amparo à Pesquisa do Estado da Bahia) for doctoral scholarship grants.

## Collaborations

Fernandes ETBS, Dias ACS, Ferreira SL, Marques GCM and Pereira COJ declare they have contributed to the conception of the study, analysis and interpretation of data, critical review of intellectual content and approval of the final version to be published.

## References

1. Chacam AS, Maia MB, Camargo MB. Autonomia, gênero e gravidez na adolescência: uma análise comparativa da experiência de adolescentes e mulheres jovens provenientes de camadas médias e populares em Belo Horizonte. *Rev Bras Est Pop*. 2012.; 29(2): 389-407.
2. Yalew SA, Zeleke BM, Teferra AS. Demand for long acting contraceptive methods and associated factors among family planning service users, Northwest Ethiopia: a health facility based cross sectional study. *BMC Res Notes*. 2015;8(29):29.
3. Darteh EK, Doku DT, Esia-Donkoh K. Reproductive health decision making among Ghanaian women. *Reprod Health*. 2014;11(23):23.
4. Osamor P, Grady C. Factors associated with women's health care decision-making autonomy: empirical evidence from Nigeria. *J Biosoc Sci*. 2018;50(1):70-85.
5. Clark LE, Allen RH, Goyal V, Raker C, Gottlieb AS. Reproductive coercion and co-occurring intimate partner violence in obstetrics and gynecology patients. *Am J Obstet Gynecol*. 2014;210(1):42.e1-8.
6. Biroli F. Direito ao aborto e maternidade: gênero, classe e raça na vida das mulheres. *Rev Bras Cultura*. 2017;223:27-30.
7. Upadhyay UD, Dworkin SL, Weitz TA, Foster DG. Development and validation of a reproductive autonomy scale. *Stud Fam Plann*. 2014;45(1):19-41.
8. Beaton DE, Bombardier C, Guillemin F, Ferraz MB. Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*. 2000;25(24):3186-91.
9. Ferreira MB, Haas VJ, Dantas RA, Felix MM, Galvão CM. Cultural adaptation and validation of an instrument on barriers for the use of research results. *Rev Lat Am Enfermagem*. 2017;25(0):e2852.
10. Hair JF, Anderson RE, Tatham RL, Black WC. *Análise multivariada de dados*. 5a ed. Porto Alegre. Bookman. 2005.

11. Borsa JC, Damásio BF, Bandeira DR. Adaptação e Validação de Instrumentos Psicológicos entre Culturas: Algumas Considerações. *Paidéia*. 2012;22(53):423-32.
12. Tilden VP, Nelson CA, May BA. Use of qualitative methods to enhance content validity. *Nurs Res*. 1990;39(3):172-5.
13. Ferrer M, Alonso J, Prieto L, Plaza V, Monsó E, Marrades R, Aguar MC, Khalafa, Antó JM. Validity and reliability of the St George's Respiratory Questionnaire after adaptation to a different language and culture: the Spanish example. *Eur Respir J*. 1996;9(6):1160-6.
14. Borsa JC, Damásio BF, Bandeira DR. Adaptação de instrumentos psicológicos entre culturas: algumas considerações. *Paidéia*. 2012;22(53):423-32.
15. Polit DF, Beck CT, Hungler BP. Fundamentos de pesquisa em enfermagem. 5a ed. Porto Alegre: Artmed; 2004.
16. Kline P. A Handbook of psychological testing. 2nd ed. London: Routledge; 1999.
17. Fleiss JL. The design and analysis of clinical experiments. New York: Wiley; 1986.
18. Santella F, Baleiro R, Moraes FY, Conterno LO, Filho CRS. Tradução, Adaptação Cultural e Validação do Questionário "Reação Médica à Incerteza (PRU)" na Tomada de Decisões. *Rev Bras Educ. Med*. 2015. 39(2):261-67.
19. Gonzalez EC, Almeida K. Adaptação cultural do questionário Speech, Spatial and Qualities of Hearing Scale (SSQ) para o Português Brasileiro. *Audiol Commun Res*. 2015;20(3):215-24.
20. DeVellis RF. Scale Development: theory and applications. 3rd ed. Applied Social Research Methods., California: Sage Publications; 1991.

### Annex 1. Reproductive Autonomy Scale adapted to Brazilian Portuguese.

<b>ESCALA DE AUTONOMIA REPRODUTIVA</b>	
<p>- As próximas questões são sobre você e seu principal parceiro, ou o parceiro sexual mais recente.                      - As questões perguntam sobre quem tem a palavra final em diferentes tipos de decisões.                      - Se você tem mais de um parceiro, pense no seu parceiro principal. Se você não tem um parceiro, pense em um parceiro anterior. Se você não tem como fazer nenhuma das seguintes decisões, por favor, pense em quem teria mais a dizer na decisão.</p>	
<p><b>Para estas questões, por favor, selecione uma das seguintes opções de respostas:</b></p> <p><input type="checkbox"/> Meu parceiro sexual (ou alguém da família, como os pais, ou sogra/sogro)  <input type="checkbox"/> Ambos, Eu e meu parceiro sexual (ou alguém da família como os pais, ou sogra/sogro) igualmente  <input type="checkbox"/> Eu</p>	
<p><b>Tomada de decisão</b></p> <p>1. Quem decide sobre você usar um método para evitar a gravidez?  <input type="checkbox"/> Meu parceiro sexual (ou alguém da família, como os pais, ou sogra/sogro)  <input type="checkbox"/> Ambos, Eu e meu parceiro sexual (ou alguém da família como os pais, ou sogra/sogro) igualmente  <input type="checkbox"/> Eu</p> <p>2. Quem decide sobre qual método você usaria para evitar a gravidez?  <input type="checkbox"/> Meu parceiro sexual (ou alguém da família, como os pais, ou sogra/sogro)  <input type="checkbox"/> Ambos, Eu e meu parceiro sexual (ou alguém da família como os pais, ou sogra/sogro) igualmente  <input type="checkbox"/> Eu</p> <p>3. Quem decide sobre quando ter um bebê em sua vida?  <input type="checkbox"/> Meu parceiro sexual (ou alguém da família, como os pais, ou sogra/sogro)  <input type="checkbox"/> Ambos, Eu e meu parceiro sexual (ou alguém da família como os pais, ou sogra/sogro) igualmente  <input type="checkbox"/> Eu</p> <p>4. Se você engravidasse, de forma não planejada, quem decidiria o que fazer - seja criar a criança, seja procurar por pais adotivos, seja fazer um aborto?  <input type="checkbox"/> Meu parceiro sexual (ou alguém da família, como os pais, ou sogra/sogro)  <input type="checkbox"/> Ambos, Eu e meu parceiro sexual (ou alguém da família como os pais, ou sogra/sogro) igualmente  <input type="checkbox"/> Eu</p>	
<p><b>As próximas questões são sobre você e seu principal ou mais recente parceiro sexual. Para estas questões, por favor, selecione uma das seguintes opções de respostas:</b></p> <p><input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p>	
<p><b>Ausência de coerção</b></p> <p>5. Seu parceiro te impediu de usar um método para evitar a gravidez quando você queria usar um.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p> <p>6. Seu parceiro atrapalhou ou dificultou o uso de um método para evitar a gravidez quando você queria usar um.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p>	
<p>7. Seu parceiro te fez usar algum método para evitar a gravidez quando você não queria utilizar um.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p> <p>8. Seu parceiro te impediria de usar um método para evitar a gravidez se você quisesse usar um.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p> <p>9. Seu parceiro te pressionou para engravidar.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p>	
<p><b>Comunicação</b></p> <p>10. Seu parceiro te apoiaria se você quisesse usar um método para evitar a gravidez.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p> <p>11. É fácil falar sobre sexo com seu parceiro.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p> <p>12. Se você não quisesse ter relação sexual você poderia dizer para seu parceiro.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p> <p>13. Se você estivesse na dúvida em estar grávida ou não estar grávida, você poderia conversar com seu parceiro sobre isso.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p> <p>14. Se você realmente não quisesse ficar grávida você poderia convencer seu parceiro a não ter filho.  <input type="checkbox"/> Eu discordo muito  <input type="checkbox"/> Eu discordo  <input type="checkbox"/> Eu concordo  <input type="checkbox"/> Eu concordo muito</p>	