ORIGINAL ARTICLE



Intersectional Discrimination Index: Initial stages of cross-cultural adaptation to Brazilian Portuguese

Etapas iniciais da adaptação transcultural do *Intersectional Discrimination Index* para o português do Brasil

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ABSTRACT

Objective: To perform the cross-cultural adaptation of Intersectional Discrimination Index (InDI) into Brazilian Portuguese. InDI assesses the health impacts of intersectional experiences with anticipated (InDI-A), day-to-day (InDI-D), and major (InDI-M) discrimination. **Methods:** The following steps were taken: (1) independent translations; (2) synthesis of translations; (3) evaluation by an expert committee; (4) analysis by members of the target population; (5) back translation; and (6) pre-test. Based on the evaluation by the expert committee, the content validity coefficient (CVC) was calculated for each item and for the entire instrument. CVC helped identify which items needed adjustments according to the criteria of language clarity, theoretical relevance, and practical relevance. **Results:** Of the 31 items, 24 were considered adequate and seven required further language adjustments. CVC values were satisfactory for clarity (CVCt=0.86), practical relevance (CVCt=0.87), and theoretical pertinence (CVCt=0.87); a good level of understanding was reported by the target population (mean=4.44; standard deviation=1.36). The average response time was 15.5 minutes, and no additional difficulties in interpreting the items were reported. The back-translated InDI was approved by the original authors of the instrument. **Conclusion:** The initial stages of the cross-cultural adaptation process showed that the use of InDI looks promising in Brazil. Further studies still need to examine the psychometric properties of the instrument to confirm the positive results of our work, as well as its usefulness for assessing the health impacts of intersectional experiences with discrimination.

Keywords: Health status disparities. Social discrimination. Psychometrics. Health impacts.

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INTRODUCTION

Research on the impacts of discrimination on health has gained prominence in the 1980s¹, especially because this form of oppression is considered an important social stressor and has negative consequences for the well-being of individuals and population groups². A wide body of literature³⁻⁵ has reported that perceived discrimination is associated with increased frequencies of stroke, high blood pressure, anxiety, depression, and other negative physical and mental health outcomes.

Systematic review and meta-analysis studies^{6,7} gathered studies and discrimination scales developed in the United States of America (USA), focusing on experiences of ethnic or racial motivation, as well as groups of Asian, Mexican and Latino immigrants from that region of the country. Some of the most popular instruments are the Everyday Discrimination Scale (EDS)8, the Major Experiences of Discrimination Scale⁸ and the Discrimination Experiences Scale^{2,9}. With the Inventory of Racial Experiences¹⁰ and the Explicit Discrimination Scale^{11,12}, the EDS and the Major Experiences of Discrimination Scale are among the most frequently used in research conducted in Brazil¹³⁻¹⁸.

Despite the contributions and results produced with the aforementioned instruments, most of them emphasized racial discrimination nationally and internationally. Recently, however, there is growing recognition of the need to understand the health impacts of intersectional discrimination experiences^{6,19,20}. Originating in legal and social sciences, the intersectional approach consolidates the systems of oppression and discrimination that promote exclusion and impede the healthy development of individuals and groups that are widely marginalized²¹⁻²⁴. An intersectional perspective in the context of health is, therefore, capable of deepening the understanding of social processes that cause inequities in health, helping in testing, in the development of new theories, and in the implementation of more effective policies to fight injustices in health¹⁹. These studies, in addition to investigating individual risk markers, such as gender and income²⁵, should analyze how these factors intersect in complex ways to shape health in different contexts^{5,26}. By examining the intersection between different systems of oppression, one can better capture the complexity of social processes that reflect on health and health inequities¹⁹.

Although the number of studies including intersectionality in their approach is increasing, some challenges require attention. There is conceptual imprecision, lack of adequate instruments for measuring intersectional discrimination and the procedures involved in data analysis²⁷. Recent studies^{5,28,29} aimed to address some of the challenges encountered when adopting an intersectional perspective in health studies. Scheim and Bauer²⁸ developed an instrument that could measure intersectional experiences of day-to-day, major and anticipated discrimination, finding good evidence of validity and reliability in samples from Canada and the USA.

The development procedures of the Intersectional Discrimination Index (InDI) included an extensive review of the literature on the concepts of stigma, discrimination, health and scales for measuring experiences with unfair treatment. This process was the basis for the creation of maps for each type of discrimination evaluated (i.e., anticipated, day-to-day, and major). A preliminary set of items was then created and examined by a panel of experts from Australia and the USA, with a view to adapting content coverage and refining aspects of relevance in English-speaking countries. Then, the items were submitted to a pre-test with ten volunteers so the clarity of their content and instructions could be assessed.

Unlike other scales that tend to focus only on one type of discrimination (eg racism or homophobia), the InDI does not require participants to attribute experiences of discrimination to particular reasons²⁸. In fact, the instrument questions if respondents ever experienced discrimination "because of who they are", which includes any identity characteristic considered relevant, in addition to its cross-referencing with others. The InDI takes into account that different types of discrimination, such as racial and gender, do not manifest independently in the various domains of life, but in intersection with other aspects of identity. In addition, unlike the instruments currently available in the literature, the InDI aims to assess three dimensions of discrimination: anticipated, day-to-day and major, which are often ignored in the existing literature on the subject. Taken together, these characteristics make the InDI a particularly innovative instrument to evaluate experiences with intersectional discrimination in the context of interpersonal relationships—its main object of interest. Thus, this study aimed to kick off the cross-cultural adaptation of InDI to the Brazilian context and to examine initial evidence of content validity of the preliminary translated version.

METHODS

On Intersectional Discrimination Index

The InDI is a self-report instrument with 31 items distributed in three scales that aim to measure anticipated (InDI-A), day-to-day (InDI-D) and major (InDI-M) discrimination. To limit attention to discriminatory treatment, InDI addresses experiences with discriminatory treatment "because of who you are". The following definition is provided in the instrument: "These questions are about experiences related to who you are. This includes how you describe yourself and how others might describe you. For example, your skin color, ancestry, nationality, religion, gender, sexuality, age, weight, disability or mental health problem, and income."

The InDI-A is composed of nine items and their responses are evaluated on a 5-point agreement scale, where 0 corresponds to "strongly disagree" and 4 to "strongly agree". This subscale is based on minority social stress theories, which assume that repeated exposure to discrimination makes individuals vigilant and have them anticipate these experiences^{28,30}. The InDI-D, in turn, is composed of nine items evaluated on a 4-point frequency scale, ranging from "never", "yes, but not in the past year" and "yes, once in the past year" to "yes, many times in the past year". The items in this subscale were based on instruments that assess microaggressions, ableism, fatphobia, racism, LGBTphobia, intersectional discrimination, among others²⁸. Finally, the InDI-M consists of 13 items, evaluated on a frequency scale that has the response options "never", "once" and "more than once". As it specifically refers to repeated harassment, item 9 received as response options "no", "yes, in one place" and "yes, in more than one place". This subscale also assesses whether experiences with discrimination occurred in the last 12 months. The items of major discrimination refer to extreme situations such as service denial, damage to property and violence, which were adapted from other scales^{28,31}.

Together, the InDI items were developed with the main concern of capturing experiences with different types of discrimination—not just racial—and their intersections. Thus, the proponents of the instrument wanted to contemplate items that did not privilege the experiences of a specific population segment, but rather of individuals and groups crossed by multiple axes of marginalization and oppression. To this effort, the possibility for the respondent to attribute their experiences with discrimination to various reasons was added through the question: "Thinking about all the times you have been treated unfairly or badly because of who you are, how often do you feel that each of the following was a reason why others treated you that way?" Then, a list of the most common attributions was presented (age, body size, gender identity or expression, income or economic situation, disability, religion, place of origin, race and ethnicity), followed by an open field for the respondent to indicate reasons not mentioned. Each of the assignments is evaluated as "always", "never" or "not sure".

The InDI had good preliminary validity indicators²⁸. The intraclass correlation coefficient (ICC) adjusted for test-retest reliability of the InDI-A was 0.72 (confidence interval—95%CI 0.63-0.79), while for InDI-D and InDI-M was 0.70 (95%CI 0.62–0.78) and 0.72 (0.63–0.79), respectively. The one-factor model had a good adjustment for the In-DI-A, with all global indicators meeting the cutoff points recommended in the specialized literature and factor loadings from moderate to high. In addition, Cronbach's alpha for InDI-A was 0.93, and correlations ranged from 0.69 to 0.81. Evidence of construct validity was also observed, with repeatedly marginalized participants having higher frequencies of all three types of discrimination.

Cross-cultural adaptation procedures

Guidelines on cross-cultural adaptation procedures are not consensual in the literature. This work considered the recommendations by Borsa et al.³², with six steps to be followed:

- 1. Translation of original instrument into target language;
- 2. Synthesis of translated version;
- 3. Evaluation of synthesis by expert judges;
- 4. Evaluation of the instrument by members of the target population;
- 5. Back-translation; and
- 6. Pre-test.

After being authorized by the scale proponents to carry out the InDI transcultural adaptation into Brazilian Portuguese, two independent translations were produced. Both translators were Brazilian psychologists fluent in English language and with previous experience in adapting instruments. The synthesis of translations was performed by the first and last authors, with the help of independent consultants who are fluent in both English and Portuguese.

After completing the synthesis, we calculated the content validity coefficient (CVC) of the instrument. Three independent evaluators participated in this stage and formed the expert committee. All three evaluators had a background in psychology, with a master's degree in social psychology and PhDs in clinical psychology. All professionals are researchers on prejudice, discrimination and minority stress. The synthesis was sent by e-mail to the evaluators. The criteria used to assess the questions were language clarity, practical relevance and theoretical relevance, presented on a 4-point Likert scale. For this matter, they were asked to assess the adequacy of each item to criteria, and they could vary between totally inadequate (1) and totally adequate (4). In addition, next to each question, the evaluators were allowed to add comments and suggestions to help refine them.

Based on the evaluators' answers, it was possible to calculate the CVC of the InDI as described by Cassepp-Borges et al³³. The CVC calculation followed five steps. The first, based on evaluators' scores (1 to 4), considered the scores' average for each item (Mx). Then, the initial CVC for each item (CVCi) was calculated, dividing it by the maximum value that the question could be assigned in terms of language clarity, practical relevance or theoretical relevance. In the third phase, the error (Pei) was estimated to discount possible biases of evaluators for each question. In this case, one (1) was divided by the number of evaluators, added by the number of evaluators. Thus, the final CVC (fourth step) of each item (CVCc) could be calculated by subtracting the CVCi from the Pei. The last step was aimed at calculating the instrument's global CVC (CVCt), taking into account each characteristic assessed (i.e., language clarity, practical relevance and theoretical relevance). In this last step, it was necessary to subtract the mean CVCi (MCVCi) from the

mean Pei (MPei). After that, questions with a CVCt between 0.7 and 0.8 were considered acceptable.

Semantic adjustments were made based on the evaluators' suggestions, even for items with adequate CVC, in order to make the instrument more sensitive to the Brazilian reality. Then, the InDI was evaluated by the target audience. The questionnaire was sent to 16 women of different socioeconomic levels, racial and age groups, in addition to participants who were part of sexual minorities. The objective was to ensure different perceptions about the description of items. Participants rated the clarity of all 31 items on a scale ranging from 0 (i.e., "did not understand") to 5 (i.e., "completely understood"). Respondents were also allowed to register possible queries and suggestions for the items to improve their understanding.

The back-translation into English was performed by a fourth independent translator, fluent in Portuguese and with a broad command of the English language. This translation was sent to the original authors to ensure equivalence of the content in the items and the instrument as a whole. After the approval by the original authors, the operational equivalence was examined for formats of application on different devices (smartphones, tablets, and desktops) and operating systems (Android and iOS). This process was required because the survey was applied online, to ensure that the experience of answering the instrument was as simple as possible, regardless of the device or operating system being used by the respondent. After registering the questionnaire on the Qualtrics platform, the survey was accessed on different devices and operating systems. The responsible researchers identified the need to make small adjustments to the research registration format, as some questions were unconfigured when accessed via smartphone. After these adjustments, the questionnaire was considered suitable for the pre-test.

Finally, a pre-test was conducted with ten participants who met the inclusion criteria of the study sample—identifying as female, being a Brazilian, being between 18 and 65 years old—to verify whether the instrument was clear for application in future validation studies. The questionnaire was directed to women of different sexual orientations, skin colors/races, and ages aiming at a greater diversity of perceptions about the instrument.

RESULTS

Based on the evaluations, CVC values were satisfactory for language clarity (CVCt=0.86), practical relevance (CVCt=0.87) and theoretical relevance (CVCt=0.87). All items showed satisfactory understanding per the assessment of the target audience (mean [M]=4.44; standard deviation [SD]=1.36). The items with the lowest mean of comprehensibility were i5 ("I might be denied a bank account, loan or financing because I am who I am") and i6 ("I worry about being mistreated or stopped by the police or security guards"), which had the same mean and standard deviations (M=4.19; SD=1.67), along with i26 ("Because you are who you are, have you ever lost a close relationship [for example, with a family member, friendships, partner]?) (M=4.19; SD=1.63). The items completely understood by participants were i17 ("Inappropriate, offensive or excessively personal questions asked") and i18 ("Being treated as if you were less intelligent or capable than others") (M=5.00; SD=0.00). Even with good results for content validity and comprehensibility, some adjustments were made in the wording of items according to suggestions of specialists and the target audience for the InDI-A (Table 1), the InDI-D (Table 2) and the InDI -M (Table 3).

Item 1 (InDI-A), for example, which assesses treatment by health professionals, had the phrase "maybe can treat me badly" added, since the initial translation

Table 1. Original and localized versions of the Intersectional Discrimination Index on anticipated discrimination.

Item	Original version	Localized version
1	Because of who I am, a doctor or nurse, or other health care provider might treat me poorly.	Por ser quem eu sou, talvez algum profissional de saúde (por exemplo, um médico ou enfermeiro) possa me tratar mal.
2	Because of who I am, I might have trouble finding or keeping a job.	Por ser quem eu sou, talvez eu tenha dificuldades para conseguir ou manter um emprego.
3	Because of who I am, I might have trouble getting an apartment or house	Por ser quem eu sou, posso ter problemas para conseguir um apartamento ou casa.
4	I worry about being treated unfairly by a teacher, supervisor, or employer.	Eu me preocupo em ser tratado/a de forma injusta por professores, supervisores ou chefes.
5	I may be denied a bank account, loan, or mortgage because of who I am.	É possível que me seja negada uma conta bancária, empréstimo ou financiamento por ser quem eu sou.
6	I worry about being harassed or stopped by police or security.	Eu me preocupo em ser mal tratado/a ou parado/a pela polícia ou por seguranças.
7	Because of who I am, people might try to attack me physically.	Por ser quem eu sou, as pessoas podem tentar me atacar fisicamente.
8	I expect to be pointed at, called names, or harassed when in public.	Eu já espero ser apontado/a, xingado/a ou assediado/a quando estou em público.
9	। fear that । will have a hard time finding friendship or romance because of who । am.	Tenho medo de ter dificuldade em fazer amigos ou ter um relacionamento íntimo por ser quem eu sou.

contained only the word "can", which would convey the idea of authorization. In addition to this change, the item's writing format was suggested to change, bringing examples of health professionals in parentheses to simplify the description and understanding of the question. Item 11 (InDI-D), which assesses how the person has been treated by others, originally used a word meaning "unfriendly", which was initially translated with a word meaning "hostile". This was replaced by a word meaning "aggressive" to simplify its wording. Item 12 (InDI-D), in turn, had a word meaning "insult" in the initial translation replaced by another meaning "offending". Item 16 (InDI-D), in particular, had the passage "...do not belong, do not fit in" complemented by "...do not belong or do not fit in a group or place". Items 22 and 23 (InDI-M), which address different types of unjustified treatment, had words meaning "unduly" replaced by others meaning "unfairly".

Table 2. Original and localized versions of the Intersectional Discrimination Index on day-to-day discrimination.

Item	Original version	Localized version
10	Heard, saw, or read others joking or laughing about you (or people like you).	Ouviu, viu, ou leu, outras pessoas fazendo piadas ou rindo de você (ou de pessoas como você).
11	Been treated as if you are unfriendly, unhelpful, or rude.	Foi tratado/a como se fosse uma pessoa agressiva, inútil ou rude.
12	Been called names or heard/saw your identity used as an insult.	Foi xingado/a ou ouviu/viu sua identidade ser usada para ofender alguém.
13	Been treated as if others are afraid of you.	Foi tratado/a como se os outros sentissem medo de você.
14	Been stared or pointed at in public.	Foi encarado/a ou apontado/a em público.
15	Been told that you should think, act, or look more like others.	Ouviu que deveria pensar, agir ou se parecer mais com os outros.
16	Heard that you or people like you don't belong.	Ouviu que você ou pessoas como você não pertencem ou não se encaixam em um grupo ou lugar.
17	Asked inappropriate, offensive, or overly personal questions.	Perguntas inapropriadas, ofensivas ou excessivamente pessoais foram feitas.
18	Been treated as if you are less smart or capable than others.	Foi tratado/a como se você fosse menos inteligente ou capaz do que os outros.

Table 3. Original and localized versions of the Intersectional Discrimination Index on major discrimination.

Item	Original version	Localized version
19	Because of who you are, has a health care provider ever refused you care?	Por ser quem você é, algum profissional de saúde já recusou atendimento para você?
20	Because of who you are, have you ever been fired or dismissed from a job, or been turned down for a job that you interviewed for?	Por ser quem você é, você já foi demitido/a ou dispensado/a de um emprego, ou foi recusado/a para um emprego para o qual foi entrevistado/a?
21	Because of who you are, have you ever been evicted or denied housing?	Por ser quem você é, você já foi despejado/a ou teve moradia negada?
22	Because of who you are, have you ever been unreasonably stopped and questioned, searched, or arrested by police or security?	Por ser quem você é, você já foi injustamente parado/a e questionado/a, revistado/a ou preso/a pela polícia ou segurança?
23	Because of who you are, have you ever been unreasonably expelled or suspended from school?	Por ser quem você é, você já foi injustamente expulso/a ou suspenso/a da escola?
24	Because of who you are, have you ever been unable to open a bank account, cash a cheque, or get a loan?	Por ser quem você é, já ocorreu de você não conseguir abrir uma conta bancária, descontar um cheque ou conseguir um empréstimo?
25	Because of who you are, have you ever had to move to another neighbourhood, town, city, state, province, or country?	Por ser quem você é, você já teve que se mudar para outro bairro, município, cidade, estado, região ou país?
26	Because of who you are, have you ever lost a close relationship (e.g., with a family member, friend, or partner)?	Por ser quem você é, você já perdeu alguma relação próxima (por exemplo, com um membro da família, amizades, parceiro ou parceira)?
27	Because of who you are, have you ever been repeatedly harassed at work or school, where you live, or when accessing services?	Por ser quem você é, você foi maltratado/a de forma repetida no trabalho ou na escola, onde você mora, ou ao utilizar algum tipo de serviço?
28	Because of who you are, have you ever been threatened with a physical or sexual attack?	Por ser quem você é, você já foi ameaçado/a de ataque físico ou sexual?
29	Because of who you are, have you ever been physically attacked (e.g., spit on, had objects thrown at you, hit, punched, pushed or grabbed, beaten)?	Por ser quem você é, você já foi atacado/a fisicamente (por exemplo, cuspido, objetos foram atirados em você, lhe bateram, deram socos, empurrões, puxões ou surras)?
30	Because of who you are, have you ever been made to engage in sexual activity, or been touched in a sexual way, that you didn't want?	Por ser quem você é, já fizeram você se envolver em atividade sexual, ou foi tocado/a de uma maneira que você não queria?
31	Because of who you are, have you ever had someone take, damage, or vandalize your property?	Por ser quem você é, você já passou por alguma situação na qual alguém pegou, danificou ou vandalizou algo de sua propriedade?

Finally, item 30 (InDI-M), which assesses whether the person has already been touched improperly, was adjusted. One of the experts questioned the need to add that the touching was "sexualized", considering that the respondent could be in doubt about the nature of the approach and, even so, this could represent an abusive act. Thus, the item was adjusted to read: "...have you ever been made to engage in sexual activity, or have you been touched in a way you didn't want to?". After all the adjustments according to suggestions by evaluators and the target audience, the version adapted to Brazilian Portuguese was made available on the webpage of the original author of the instrument, with versions in French, Spanish and English: https:// aydenscheim.com/research/indi/.

For the pre-test stage, the ten participants identified themselves as women and being a female; their mean age was 29.7 years (SD=9.8) and they reported a family income of less than R\$ 10,450.00 (10 minimum wages). In addition, two of them identified themselves as brown, two as black, and six as white. Three participants reported being bisexual, one homosexual, and six heterosexual. Through an online form, sociodemographic data and responses to the final version of the translated instrument were collected. Using Qualtrics to control the response time of each participant, we identified that the average response time was 15.5 minutes. The participants did not have any queries or additional suggestions regarding the content of the instrument.

DISCUSSION

Given the impacts of intersectional discrimination on physical and mental health, providing an instrument capable of addressing it can facilitate both clinical practice and the development of research and public policies aimed at promoting equity in health. The InDI can also be applied to social science research on intersectional discrimination, specifically in the longitudinal monitoring of discrimination trends. As this is a short instrument that measures discrimination in different situations, the InDI has easy application and implementation to clinical practice and other contexts of public service provision, for example.

This article highlights the importance of a clear cross-cultural adaptation process of instruments. The steps of translation, synthesis of translated version, evaluation by experts and by the target audience, back-translation and pre-test³² were followed. In addition to expert assessments, which were of paramount importance, suggestions from the target audience greatly enriched the process and made the instrument more sensitive to the Brazilian context. After following Borsa et al.³² guidelines for cross-cultural adaptation, the result was an instrument with good levels of language clarity, theoretical relevance, practical relevance and understandability, adapted to the Brazilian context for specific use in female populations.

The InDI is an innovative scale, as it encompasses a greater diversity of manifestations of discrimination and uses the expression "for being who you are", instead of being based on specific attributions of discrimination. Thus, the InDI Brazilian Portuguese version may be useful for future studies that aim to investigate the influences of discrimination on health outcomes of different marginalized groups across the country. It is hoped that the localized version of InDI will contribute to generating more robust evidence on the patterns and consequences of intersectional discrimination.

In this study, we restricted the sample to women of different races and sexual orientations, unlike the original study, whose sample was broader²⁸; this restriction represents, therefore, an important limitation. It should be noted, therefore, that future studies are needed to assess whether the instrument is suitable for other minority populations. Another limitation is related to the expert committee, formed exclusively by psychologists. Future studies are suggested to involve multidisciplinary teams to understand intersectionality in different social contexts, not only from the mental health perspective.

Future psychometric studies that evaluate the reliability and internal/external validity of the instrument should be carried out, aiming to advance with the transcultural adaptation process of the first Brazilian version of InDI³⁴. It is believed that, after evaluating its psychometric properties, the instrument can be used as a basis for the development of interventions and initiatives to promote the well-being of populations placed at the intersection of multiple axes of marginalization and oppression.

APPROVAL BY ETHICS COMMITTEE

Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), opinion number: 4.458.136.

REFERENCES

- 1. Krieger N. Measures of racism, sexism, heterosexism, and gender binarism for health equity research: from structural injustice to embodied harm-an ecosocial analysis. Annu Rev Public Health 2020; 41: 37-62. https://doi.org/10.1146/ annurev-publhealth-040119-094017
- 2. Krieger N, Smith K, Naishadham D, Hartman C, Barbeau EM. Experiences of discrimination: validity and reliability of a self-report measure for population health research on racism and health. Soc Sci Med 2005; 61(7): 1576-96. https://doi.org/10.1016/j.socscimed.2005.03.006
- 3. Pascoe EA, Richman LS. Perceived discrimination and health: a meta-analytic review. Psychol Bull 2009; 135(4): 531-54. https://doi.org/10.1037/a0016059
- 4. Schmitt MT, Branscombe NR, Postmes T, Garcia A. The consequences of perceived discrimination for psychological

- well-being: A meta-analytic review. Psychol Bull 2014; 140(4): 921-48. https://doi.org/10.1037/a0035754
- 5. Bauer G, Scheim Al. Methods for analytic intercategorical intersectionality in quantitative research: discrimination as a mediator of health inequalities. Soc Sci Med 2019; 226: 236-45. https://doi.org/10.1016/j.socscimed.2018.12.015
- 6. Bastos JL, Celeste RK, Faerstein E, Barros AJD. Racial discrimination and health: a systematic review of scales with a focus on their psychometric properties. Soc Sci Med 2010; 70(7): 1091-9. https://doi.org/10.1016/j. socscimed.2009.12.020
- 7. Paradies Y, Ben J, Denson N, Elias A, Priest N, Pieterse A, et al. Racism as a determinant of health: a systematic review and meta-analysis. PLoS One 2015; 10(9): e0138511. https:// doi.org/10.1371/journal.pone.0138511
- 8. Williams DR, Yu Y, Jackson JS, Anderson NB. Racial differences in physical and mental health. Socio-economic status, stress and discrimination. J Health Psychol 1997; 2(3): 335-51. https://doi.org/10.1177/135910539700200305
- 9. Fattore GL, Teles CA, Santos DN, Santos LM, Reichenheim ME, Barreto ML. Validade de constructo da escala Experiences of Discrimination em uma população brasileira. Cad Saúde Pública 2016; 32(4): e00102415. https://doi. org/10.1590/0102-311X00102415
- 10. Landrine H, Klonoff EA. The schedule of racist events: a measure of racial discrimination and a study of its negative physical and mental health consequences. J Black Psychol 1996; 22(2): 144-68. https://doi.org/10.1177/00957984960222002
- 11. Bastos JL, Faerstein E, Celeste RK, Barros AJD. Explicit discrimination and health: development and psychometric properties of an assessment instrument. Rev Saúde Pública 2012; 46(2): 269-78. https://doi.org/10.1590/ s0034-89102012000200009
- 12. Bastos JL, Reichenheim ME, Paradies YC. Scaling up research on discrimination and health: the abridged Explicit Discrimination Scale. J Health Psychol 2022; 27(9): 2041-55. https://doi.org/10.1177/13591053211018806
- 13. Mendes PM, Nobre AA, Griep RH, Juvanhol LL, Barreto SM, Fonseca MJM, Chor D. Association between race/color and incidence of hypertension in the ELSA-Brasil population: investigating the mediation of racial discrimination and socioeconomic position. Ethn Health 2022; 27(5): 1047-57. https://doi.org/10.1080/13557858.2020.1861586
- 14. Machado AV, Camelo LV, Chor D, Griep RH, Guimarães JMN, Giatti L, Barreto SM. Racial inequality, racial discrimination and obesity incidence in adults from the ELSA-Brasil cohort. J Epidemiol Community Health 2021; jech-2020-214740. https://doi.org/10.1136/jech-2020-214740
- 15. Mendes PM, Nobre AA, Griep RH, Guimarães JMN, Juvanhol LL, Barreto SM, et al. Association between perceived racial discrimination and hypertension: findings from the ELSA-Brasil study. Cad Saude Publica 2018; 34(2): e00050317. https://doi.org/10.1590/0102-311X00050317
- 16. Burgard S, Castiglione DP, Lin KY, Nobre AA, Aquino EML, Pereira AC, et al. Differential reporting of discriminatory

- experiences in Brazil and the United States. Cad Saude Publica 2017; 33(Suppl 1): e00110516. https://doi. org/10.1590/0102-311X00110516
- 17. Faerstein E, Chor D, Werneck GL, Lopes CS, Kaplan G. Race and perceived racism, education, and hypertension among Brazilian civil servants: the Pró-Saúde Study. Rev Bras Epidemiol 2014; 17 Suppl 2: 81-7. https://doi. org/10.1590/1809-4503201400060007
- 18. Celeste RK, Gonçalves LG, Faerstein E, Bastos JL. The role of potential mediators in racial inequalities in tooth loss: the Pró-Saúde study. Community Dent Oral Epidemiol 2013; 41(6): 509-16. https://doi.org/10.1111/cdoe.12051
- 19. Bauer GR. Incorporating intersectionality theory into population health research methodology: challenges and the potential to advance health equity. Soc Sci Med 2014; 110: 10-7. https://doi.org/10.1016/j.socscimed.2014.03.022
- 20. Lewis TT, Cogburn CD, Williams DR. Self-reported experiences of discrimination and health: scientific advances, ongoing controversies, and emerging issues. Annu Rev Clin Psychol 2015; 11: 407-40. https://doi.org/10.1146/ annurev-clinpsy-032814-112728
- 21. Bowleg L, Bauer G. Invited reflection: quantifying intersectionality. Psychology of Women Quarterly 2016; 40(3): 337-41. https://doi.org/10.1177/0361684316654282
- 22. Crenshaw K. Demarginalizing the intersection of race and sex: a black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist politics. University of Chicago Legal Forum 1989; 1(8): 57-80.
- 23. Bauer GR, Scheim Al. Advancing quantitative intersectionality research methods: intracategorical and intercategorical approaches to shared and differential constructs. Social Science and Medicine 2019; 226: 260-2. https://doi. org/10.1016/j.socscimed.2019.03.018
- 24. McCall L. The complexity of intersectionality. Signs 2005; 30(3): 1771-800. https://doi.org/10.1086/426800
- 25. Buffarini R, Abdalla S, Weber AM, Costa JC, Menezes AMB, Gonçalves H, et al. The intersectionality of gender and wealth in adolescent health and behavioral outcomes in Brazil: The 1993 Pelotas birth cohort. | Adolesc Health 2020; 66(1S):S51-7. https://doi.org/10.1016/j.jadohealth.2019.08.029
- 26. Barnils NP, Eurenius E, Gustafsson PE. Self-rated health inequalities in the intersection of gender, social class and regional development in Spain: exploring contributions of material and psychosocial factors. Int J Equity Health 2020; 19(1): 85. https://doi.org/10.1186/s12939-020-01202-7
- 27. Bauer GR, Churchill SM, Mahendran M, Walwyn C, Lizotte D, Villa-Rueda AA. Intersectionality in quantitative research: a systematic review of its emergence and applications of theory and methods. SSM Popul Health 2021; 14: 100798. https://doi.org/10.1016/j.ssmph.2021.100798
- 28. Scheim Al, Bauer GR. The intersectional discrimination index: development and validation of measures of selfreported enacted and anticipated discrimination for intercategorical analysis. Soc Sci Med 2019; 226: 225-35. https://doi.org/10.1016/j.socscimed.2018.12.016

- 29. Scheim Al, Bauer GR, Bastos JL, Poteat T. Advancing intersectional discrimination measures for health disparities research: protocol for a bilingual mixed methods measurement study. JMIR Res Protoc 2021; 10(8): e30987. https://doi.org/10.2196/30987
- 30. Meyer IH. Minority stress and mental health in gay men. J Health Soc Behav 1995; 36(1): 38-56. PMID: 7738327
- 31. Herek GM. Hate crimes and stigma-related experiences among sexual minority adults in the United States: prevalence estimates from a national probability sample. J Interpers Violence 2008; 24(1): 54-74. https://doi. org/10.1177/0886260508316477
- 32. Borsa JC, Damásio BF, Bandeira DR. Cross-cultural adaptation and validation of psychological instruments: some considerations. Paidéia (Ribeirão Preto) 2012; 22(53): 423-32. https://doi.org/10.1590/S0103-863X2012000300014
- 33. Cassepp-Borges V, Balbinotti MAA, Teodoro M., Pasquali L. Tradução e validação de conteúdo: uma proposta para a adaptação de instrumentos. In: Pasquali L, editor. Instrumentação psicológica: fundamentos e práticas. Porto Alegre: Artmed; 2010. p. 506-20.
- 34. Reichenheim M, Bastos JL. What, what for and how? Developing measurement instruments in epidemiology. Rev Saúde Pública 2021; 55: 40. https://doi.org/10.11606/ s1518-8787.2021055002813

Objetivo: O presente estudo realizou a adaptação transcultural do Intersectional Discrimination Index (InDI) para o português do Brasil. Trata-se de um instrumento composto de 31 itens, que visa mensurar os impactos para a saúde de experiências interseccionais com discriminação antecipada (InDI-A), cotidiana (InDI-D) e maior (InDI-M). **Métodos:** Foram percorridas as seguintes etapas: (1) traduções independentes; (2) síntese das traduções; (3) avaliação por comitê de especialistas; (4) análise por membros da populaçãoalvo; (5) tradução reversa; e (6) pré-teste. Calculou-se igualmente o coeficiente de validade de conteúdo (CVC) de cada um dos itens e de todo o instrumento. O CVC foi empregado por permitir identificar quais itens necessitavam de ajustes de acordo com os critérios de clareza de linguagem, relevância teórica e pertinência prática. **Resultados:** Dos 31 itens do instrumento, 24 foram considerados adequados e sete necessitaram de ajustes de linguagem. Os valores dos CVC foram satisfatórios para os critérios de clareza de linguagem (CVCt=0,86), pertinência prática (CVCt=0,87) e relevância teórica (CVCt=0,87), e o público-alvo considerou satisfatória a compreensão do instrumento (média=4,44; desvio padrão=1,36). O tempo médio de resposta foi de 15,5 minutos e não foram registradas dúvidas adicionais. A tradução reversa foi aprovada pelos autores originais do instrumento. **Conclusão:** As etapas iniciais do processo de adaptação transcultural mostraram que o InDI parece promissor para uso no Brasil. Estudos futuros ainda precisam examinar as propriedades psicométricas do instrumento para confirmar os resultados positivos do presente trabalho, bem como sua utilidade para a avaliação dos impactos para a saúde de experiências interseccionais com discriminação.

Palavras-chave: Desigualdades em saúde. Discriminação social. Psicometria. Impactos na saúde.

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