Original Article

It's possible to measure racism! Analysis of measures and scales of the racism construct

É possível medir o racismo! Análise de medidas e escalas do construto racismo

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ABSTRACT

Purpose: This research aims to analyze the construction and validation of measures and scales of the racism construct through a systematic literature review. The purpose is to examine how these instruments are built based on statistical recommendations for scale development.

Methodology: A systematic literature review followed well-defined inclusion and exclusion criteria. Data were collected from databases available on the Portal de Periódicos Capes, covering a period up to December 2023 (with no start date limitation). After removing duplicate articles and applying the defined filters, six studies were selected for the analysis of scale construction.

Findings: Three specific scales were identified to measure and evaluate the racism construct: the Modern Racism Scale, the Symbolic Racism Scale, and the Ethno-Racial Attitudes Scale. Although there is a predominance of studies on the Modern Racism Scale, other instruments were excluded from the analysis corpus due to non-compliance with inclusion criteria, especially related to article availability.

Originality: Among the 82 analyzed articles, those focused on measures and scales of the racism construct do not provide an analysis of the development of these instruments. This study brings to light an analysis of the construction and validation of these measures and scales.

Keywords: Racism; Scale construction; Measures; Measurement scales; Construct

RESUMO

Objetivo: Esta pesquisa tem como objetivo analisar a construção e validação de medidas e escalas do construto racismo, por meio de uma revisão sistemática da literatura. O propósito é analisar como esses instrumentos são construídos a partir de recomendações estatísticas para o desenvolvimento de escalas.

Metodologia: Conduziu-se uma revisão sistemática de literatura seguindo descritores e critérios de inclusão e exclusão bem definidos. Os dados foram coletados nas bases de dados disponíveis no Portal

de Periódicos Capes, abrangendo um período até dezembro de 2023 (sem delimitação de data para início). Após a remoção de artigos duplicados e aplicação dos filtros definidos, seis estudos foram selecionados para análise da construção das escalas.

Resultados: Três escalas específicas foram identificadas para medir e avaliar o constructo racismo: Escala de Racismo Moderno, Escala de Racismo Simbólico e Escala de Atitudes Étnico-Raciais. Embora haja uma predominância de estudos sobre a Escala de Racismo Moderno, outros instrumentos foram excluídos do *corpus* de análise devido à não conformidade com os critérios de inclusão, especialmente relacionados à disponibilidade dos artigos.

Originalidade: Entre os 82 artigos analisados, aqueles focados em medidas e escalas do construto racismo não oferecem uma análise sobre o desenvolvimento desses instrumentos. Este estudo traz à tona uma análise da construção e validação dessas medidas e escalas.

Palavras-chaves: Racismo; Construção de escalas; Medidas; Escalas de mensuração; Construto

INTRODUCTION

In a conservative and intolerant historical-cultural context, aspects of discrimination, prejudice, and exclusion are present in all spaces. This includes workplaces, the academic environment, and public life. Concerning the racial issue, the focus of this study, it is understood that there are three categories associated with the racial idea: racism, racial prejudice, and racial discrimination. According to Almeida (2019), although there is a relationship, racism differs from prejudice and racial discrimination.

In the spaces where debates around racial issues take place, there are various conceptualizations of racism (Almeida, 2019). It is noted that racism presents itself in different ways, however, whether as structural racism, institutional racism, epistemic racism, cordial racism, symbolic racism, modern racism, ambivalent racism, or aversive racism, all conceptions have in common the interest in evaluating racism and its new configurations (Pettigrew & Meertens, 1995; Pacheco, 2015; Nogueira, 2015; Fernandes & Pereira, 2019; Almeida, 2019).

Discussing the racism construct can help build a better understanding of diversity and how it can benefit everyone. This knowledge can be used to improve society as a whole. Knowing that in research whose themes are gender, social classes, and ethnic-

racial relations, the predominant epistemological perspective is the anti-positivist one, that is, they make use of lenses that question in a meaningful and reflective way and that provide realism and humanity to social phenomena (Burrell & Morgan, 1979; Sousa Santos, 1988; Cunha & Rego, 2019) it is necessary to address the mainstream of social sciences with the objective of this article to know and analyze the existing measurement measures regarding the racism construct.

Approach racism from a positivist epistemology, that is, with the intention of "[...] explaining and predicting what happens in the social world in search of regularities and causal relationships between its constituent elements" (Burrell & Morgan, 1979, p. 5) provides the field of social studies with contributions and insights regarding the importance of quantitative measures for the analysis and understanding of the racism construct broadly.

Consequently, the primary objective of this study is to analyze the construction and validation of measures and scales of the racism construct. To achieve this aim, the paper commences with a concise exposition of the theoretical underpinnings of racism. Subsequently, a detailed account of the research methodology employed in this inquiry is provided. Following this, the findings extracted from relevant literature are delineated, adhering to pre-established criteria. This is succeeded by an examination of the development of measurement instruments about the racism construct. Lastly, the study offers reflections and proposes avenues for future research endeavors.

LITERATURE REVIEW

It is understood that there are three categories associated with the racial idea: racism, racial prejudice, and racial discrimination. According to Almeida (2019), although there is a relationship, racism is distinct from prejudice and racial discrimination. Racism - a construct that has been the focus of this study - is considered a "systematic form of discrimination based on race, and which manifests itself through conscious

or unconscious practices that culminate in disadvantages or privileges for individuals, depending on the racial group to which they belong." (Almeida, 2019, 22).

For the Ministry of Education (2006) racism can be understood as A belief system or political structure built upon the entitlement of one race (deemed pure or superior) to exert dominance over others or extreme prejudice against individuals belonging to a different race or ethnicity, generally considered inferiority or even an attitude of hostility towards a certain category of people.

"Racism is the worst form of discrimination because the person discriminated against cannot change the racial characteristics that nature gave him" (Sant'Ana, 2005, p. 41). According to Almeida (2019), in the spaces where debates around racial issues take place, there are various conceptualizations for racism. It is observed that the racism construct presents itself in multiple ways, such as (1) structural racism; (2) institutional racism; (3) epistemic racism; (4) cordial racism; (5) symbolic racism; (6) modern racism; (7) ambivalent racism; or (8) aversive racism.

Therefore, the multidimensional character of this construct is observed. Furthermore, racism can be observed from the following dimensions: threat to the principles of equality and justice; denial of prejudice and discrimination; and affirmation of ethnic-racial differences. In this sense, continuous efforts to develop, adapt and validate instruments capable of measuring racism have been carried out internationally and nationally (Navas, 1998; Henry & Sears, 2002; Santos et al, 2006; Cárdenas, 2007; Campo-Arias et al., 2016; Fernandes & Pereira, 2019).

Based on the above and considering the general objective presented, the analysis of the instruments for measuring the racism construct (and its multiple forms presented above) will be based on the studies by DeVellis (2017) and Hair Jr, et al. (2005; 2019) regarding the development of a scale to measure the construct that is intended to be investigated.

METHODOLOGY

To develop this research, a systematic literature review was carried out. The focus of the systematic review carried out is to identify, select, and critically evaluate the studies related to the instruments for measuring the racism construct, synthesizing the results in a bibliographic portfolio and avoiding bias or bias in the results obtained through the prior definition of inclusion criteria and exclusion of data (Rother, 2007; Ferenhof & Fernandes, 2014).

This systematic review included the databases present in the Portal de Periódicos Capes (Web of Science, SCOPUS, SAGE Journals Online, Science Direct, Oxford Journals, Gale Academic OneFile, Emerald Insight, Cambridge Journals Online, Spell, Applied Social Sciences Index and Abstracts (ASSIA) (ProQuest), Wiley Online Library and SocINDEX), without a specified commencement date, limited until December 2023. The UDESC VPN and/or CAFe Network were used to expand the search results.

In the first searches, generic terms were used for later application of more specific terms. It is considered that these first searches were relevant because it allowed identifying the need to delimit the research query to return articles aligned with the scope and relevant to this research: instruments for measuring the racism construct. With that, the systematic search was redone delimiting the search query: [racism AND scale OR measurement OR "measurement scale" OR measure] OR [racismo AND escala OR mensuração OR "escala de mensuração" OR medida].

The above descriptors (in both languages) were searched in the titles of the articles, which resulted in the identification of 82 articles. The survey was exported to EndNote® software to assist in bibliographic management and subsequently organized using an Excel® spreadsheet. Following an initial examination of the publications, the first filtering was performed: eliminating duplicate articles, using the *find resource duplicates* in EndNote® and exclusively including documents qualifying as scientific articles, published in peer-reviewed scholarly journals, and openly accessible online

via the consulted databases, resulting 44 articles for scrutiny. The subsequent filtration process involved the elimination of publications not meeting the research's inclusion criteria (articles in Portuguese, English, or Spanish, which contained [racism AND scale OR measurement OR "measurement scale" OR measure] OR [racismo AND escala OR mensuração OR "escala de mensuração" OR medida] in the title. Finally, the third filtering consisted of reading the articles to identify those that dealt with instruments for measuring the construct of racism in general contexts (without specifying a specific context such as hospitals; specific groups, such as indigenous peoples; and without treating it as synonymous with prejudice and discrimination) and that had fundamental aspects for an analysis of a scale, such as items, sample and analyzes used. After the 3 filtering, 7 articles remained related to the scope of this study, namely: instruments for measuring the racism construct.

Although only 7 articles were considered for the purpose of fulfilling the objective of this study, it is considered appropriate to discuss the topics addressed in the other articles for reliability and repeatability purposes. The topics addressed in the articles excluded in filters 2 and 3 are summarized below.

• Description of recent experiences of racism reported by New Zealand adults over a period using data previously collected from various national cross-sectional surveys.

• Identification of quantitative measures of systemic racism that significantly impact reproductive health outcomes through the literature review.

• Proposition of a measure of institutional racism in Academic Health Centers, but without information on the construction of the instrument.

• Description of how working black women perceive and respond to racism.

• Criticisms regarding the conceptualization and measurement of symbolic racism.

• Review of worldwide evidence (from 1995 onwards) of racism, plus comparison of existing measurement approaches with emerging best practices.

• Exploration of pregnant African American women's experiences of racism.

• Investigation of the usefulness of a previously developed Internet search-based area racism proxy as a predictor of black mortality rates.

• Comparison of the roles of discrimination and surveillance in racial inequalities in two measures related to weight, body mass index (BMI), and waist circumference (WC).

• Investigation into the impact of racism on diverse aspects of public opinion during the 2008 presidential election.

• Recognition of discoveries elucidating the role of racism in racial disparities in kidney transplantation.

• Review of literature to pinpoint studies utilizing quantitative metrics to gauge exposure to systemic racism in reproductive health studies among populations.

• Discussion of the political processes that have been driving the construction of educational policies in Brazil concerning racial issues, stressing the relationship between global actors and processes and the protagonism of the Brazilian Black Movement.

• Pilot development of a latent class multidimensional measure.

• Collaboration with the theoretical development of conceptual evaluations built on the possible effects of counterintuitive advertising communication on the beliefs of the individual receiver of its message.

Even considering the importance and relevance of the studies summarized above for the construction of knowledge about racism, we chose to select studies that were directly related to the objective of this article, that is, studies that present instruments for measuring the racism construct (and its multiple forms) in a general context. Thus, we chose to exclude studies that:

a) they specified context: racism in hospitals, obstetric racism, consumer racism, airline racism, online racism, telephone racism, etc;

b) specified group: Indigenous etc;

c) did not differentiate from other concepts: prejudice, discrimination, intolerance, etc.;

d) not focus on the construction, replication, or adaptation of measurement instruments;

e) did not present statistical information regarding the development of the scales.

From this, the seven articles selected to compose the corpus of analysis are listed in Table 1.

Table 1 – Articles selected for analysis

YEAR	AUTHORS	TITLE	JOURNAL
1996	Mcneilly et al	The perceived racism scale: a multidimensional assessment of the experience of white racism among African Americans	Ethnicity & disease
1998	Navas, Maria Soledad	New measurement instruments for the new racism	International Journal of Social Psychology
2002	Henry, P. J.; Sears, D. O.	The Symbolic Racism 2000 scale	Political Psychology
2006	Santos, Walberto Silva dos et al.	The modern racism scale: adaptation to Brazilian context	Psychology in Studies
2007	Cárdenas, Manuel.	The Modern Racism Scale: Psychometric Properties and Its Relationship with Psychosocial Variables	Univ. Psychol.
2016	Campo-Arias, A. et al.	Psychometric assessment of a brief Modern Racism Scale	Revista de salud public
2019	Fernandes, S. C. S.; Pereira, M. E.	Ethnic-racial attitudes: Elaboration and evidence of validity of a measure of Brazilian racism	Psico

Source: Elaborated by the authors (2024)

The articles that make up the analysis corpus of this study were analyzed based on the steps for the construction of variable measurement instruments, based on the studies by DeVellis (2017) and Hair Jr, et al. (2005; 2019) to be exemplified below.

RESULTS AND ANALYSIS

In this section, the steps for the construction of instruments for measuring the variables to be adopted during the analysis of this study are initially presented. Then the results are based on the analysis criteria.

For Pioli et al (2020) certain phenomena require observations and quantification of variables to generate knowledge. However, if researchers are not familiar with reliable and valid measurement methods, they may end up measuring incorrectly. According to Hair Jr. et al (2005), the correct measurement of a construct is essential to ensure accurate interpretations and conclusions. That is why the precise definition of the construct being studied is so important before starting with the development and validation stages of a scale, that is, understanding which attitude/perception/phenomenon should be measured (Hai Jr. et al, 2019).

Because of this, DeVellis (2017) presents steps that must be followed in the construction of variable measurement instruments. The development of a scale is not something simple, considering that several aspects need to be evaluated.

The initial phase involves the precise delineation of the intended measurements, wherein the researcher must establish clear objectives regarding what is to be assessed, whether targeting a specific or overarching construct and discerning its distinctiveness from existing measures. Subsequently, the development of the measurement scale items representing the latent trait ensues, necessitating a comprehensive literature review and the exercise of researcher creativity. Following this, the determination of the measurement/response format is undertaken. The ensuing step entails the review/validation of the item set by domain specialists, encompassing evaluations of clarity, objectivity, and relevance. Subsequent adjustments based on specialists' feedback are then considered. Pre-testing of items with individuals sharing demographic characteristics akin to the target population follows suit. Subsequently, a thorough evaluation of items via statistical analyses (e.g., correlation, construct reliability, factorial analysis) is conducted, culminating in the refinement of the scale and adjustments to its length. The steps described above can be seen in Table 2.

Table 2 – Steps for building a scale

STEPS	STEP DESCRIPTION
1	Clarity of what is the intended measure
2	Creating the Scale Item Set
3	Determining the measurement/response format
4	Review of starter items by experts in the field
5	Consider including validation items
6	Conducting pre-tests
7	Evaluation of items
8	Optimize scale size

Source: Elaborated by the authors (2024)

Based on the steps for building a scale, as well as the steps described in Table 1: Steps for selecting articles, four instruments for measuring the racism construct were identified: (1) Modern Racism Scale; (2) Symbolic Racism Scale; (3) Ethnic-Racial Attitudes Scale; and (4) Perceived Racism Scale.

The instrument to measure Modern Racism will be analyzed through studies by Navas (1998), Santos et al (2006), Cárdenas (2007), and Campo-Arias et al. (2016). The instrument to measure Symbolic Racism will be analyzed through the study of Henry and Sears (2002). The Ethnic-Racial Attitudes Scale will be analyzed through the study by Fernandes and Pereira (2019). And the Perceived Racism Scale will be analyzed through the study by McNeilly et al (1996).

During the selection of articles to compose the corpus of analysis, studies by McConahay et al. (1981) and McConahay (1986) address the Modern Racism Scale, however these studies were not analyzed because in the first the procedures for developing and measuring scales (items, sample, factorial analysis) and emerging factors were not described and the second is not freely available online.

Furthermore, the study by McConahay et al. (1976) which addresses the construction of Symbolic Racism was not analyzed because it aims to apply two scales without mentioning the procedures for developing and measuring scales.

The individual analyses of each measurement instrument for the racism construct are presented below.

The study *"New measurement instruments for the new racism"* by Navas (1998) aims to adapt the Modern Racism Scale by McConahay et al (1981) for use with the Spanish population. Initially, the scale consisted of ten items that were translated and adapted from the scale by McConahay et al (1981). The scale used offers Likert-type alternatives, 7 points (where 1 = totally disagree and 7 = totally agree). The author did not inform whether the initial items were reviewed by specialists in the field, nor did she inform whether she included or excluded items after validation by these experts.

The pre-test was performed by applying the scale to 263 subjects (191 women and 71 men). The author informed that the participation of the subjects was voluntary, but did not inform if the choice was random. According to Hair et al. (2009, p. 108), preferably the sample size should be greater than or equal to 100. As a general rule, the item-sample size ratio should reach a ratio of 5:1 and the most acceptable size would have a ratio of 10:1. (Hair et al., 2009, p. 108). Therefore, the sample is compatible with the number of items. The sample is characterized by participants aged between 16 and 39 years old, most are students from the *Universidad de Almería*, with political ideology divided between 46% left or extreme left, 16.3% center, and 21.3% right the extreme right.

The adapted scale proposed by Navas (1998) used Cronbach's Alpha to assess the internal consistency of the scale. Cronbach's Alpha is a measure of reliability that assesses the consistency of the entire scale, which ranges from 0 to 1, with values from 0.60 to 0.70 considered the lower limit of acceptability (HAIR et al., 2009, p. 126). The scale has an Alpha of |0.8297|, demonstrating an acceptable result according to Hair et al. (2009). However, the author did not inform whether Cronbach's Alpha was performed by dimension, as suggested by Hair et al. (2009), or whether it was performed for the full scale. The author performed a factor analysis (principal component method with *varimax rotation*) resulting in the identification of three factors that together explain 61.8% of the scale variance. From this, there is a final scale composed of ten items, distributed in three dimensions.

The study "*The modern racism scale: adaptation to Brazilian context*" by Santos et al. (2006) aims to adapt the Modern Racism Scale, by McConahay et al, 1981) to this context, seeking to follow the steps adopted by Navas (1998). Initially, the scale items were replicated from the study by Navas (1998) - ten items distributed in 3 dimensions - complemented by the inclusion of seven more items. The measure format was a scale composed of items that offer Likert-type alternatives, 7 points (1= totally disagree and 7= totally agree). The authors did not inform whether there was a review stage of the initial items by specialists, nor whether items were included or excluded after validation by specialists in the area.

Santos et al. (2006) translated the initial items of the scale into Portuguese and carried out the semantic validation of the original items and those seven that were inserted, considering a sample of 20 people from the target population. No substantial changes needed to be made, as it was demonstrated that both the items and the instructions for responding to them were perfectly understandable (Navas, 1998).

The pre-test was performed by applying the scale to 269 participants, chosen non-randomly. According to Hair et al. (2009), the sample is compatible with the number of items. The sample is characterized by participants aged between 15 and 38 years, mostly students, single and female. The choice of an adequate sample is considered, since only those who asked to indicate their race/ethnic group, and identified themselves as white, were part of the study, who should respond concerning blacks.

Santos et al. (2006) presented the steps to reach the final scale. Initially, it verified the pertinence of carrying out the factor analysis, using the KMO (Kaiser-Meyer- Olkin) and Bartlett's Test of Sphericity. Then, he performed the Principal Components (PC) analysis, establishing the varimax rotation. The results of this analysis indicated the presence of three factors, according to the study by Navas (1998) but most of the instrument items with a factorial load equal to or greater than |0.40| saturated in the first two factors. Thus, Santos et al. (2006) through the percentage of explained total variance, the internal consistency indices of the three factors, and observing the Scree

Plot, considered a bifactorial structure for the set of items. The author redid all the previous steps, excluding items that had factor loadings below |0.40|, and calculated the variances and Cronbach's Alpha for each dimension. It is observed, therefore, that Cronbach's Alpha was properly calculated, reaching α = 0.71 for dimension (a) and α = 0.74 for dimension (b), indices that demonstrate the internal consistency of the scale. The final scale was composed of 14 items, divided into two dimensions. It is observed that the study did not prove the validity of the scale, but considered the multidimensionality of the racism construct when developed the Modern Racism scale adapted to the Brazilian context.

The study "*The Modern Racism Scale: Psychometric Properties and Its Relationship with Psychosocial Variables*" by Cárdenas (2007) aims to adapt the Modern Racism Scale by McConahay et al (1981) for use with the Chilean population, to observe its psychometric properties (reliability and validity), along with its relationship with other relevant psychosocial variables in studies on prejudice and ethnic discrimination (authoritarianism, religiosity, political position, etc.), as well as with other forms of prejudice (gender stereotypes and homophobia).

The initial items were composed of the Modern Racism Scale by McConahay et al (1981) in a ten-item version, adapted to measure prejudice towards Bolivian immigrants. This adapted scale was not referenced in the article by Cárdenas (2007). The format of the measure was a scale composed of items that offer Likert-type alternatives, 6 points (1= totally disagree and 6= totally agree).

The author did not inform whether the initial items were included and/or excluded from the review by experts in the field. The pre-test was carried out by applying the scale to 120 students, chosen in a non-random way. According to Hair et al. (2009), the sample is compatible with the number of items. The sample is characterized by 43 men and 77 women, whose ages ranged between 18 and 34 years old and who were studying the first year of the degree course in psychology at the Universidad Católica del Norte.

Cárdenas (2007) presented the results of the internal consistency tests, namely: Cronbach's alpha. However, the author did not calculate Cronbach's alpha for each dimension, according to Hair et al. (2009). The author carried out a factorial analysis, with varimax rotation, revealing the presence of two main factors that explain 50.52% of the general variance. Cárdenas (2007) carried out sample adequacy measures for data adjustments, namely: KMO = 0.85 and Barttlet 's sphericity test: x2 = 315.33; p < 0.001).

Unlike the study by Navas (1998), Cárdenas (2007) included seven items in the first dimension, calling it "threat and fear", which aimed to reveal a perception that immigrants reached a very high level of influence and that they question the current distribution of rights between the minority and group population. The second dimension included three items, calling it "understanding and support" that Chilean citizens should provide to immigrants. Unlike Navas (1998), the author in this case chose to include the two items with complex interpretation in the second dimension. The final scale was composed of ten items, divided into two dimensions. It is observed that the study by Cárdenas (2007) presented the correlations of the items, but did not prove the validity of the scale.

The article entitled "*Psychometric Assessment of a Brief Modern Racism Scale* " by Campo-Arias et al. (2016) aims to determine the internal consistency of the Modern Racism Scale, proposed by McConahay (1986), in medical students from Bucaramanga, Colombia. The initial items were the 10 items that make up two dimensions ('threat and fear' and 'understanding and support') and linguistic adjustments were made to the version used in the study by Cárdenas (2007). Adjustment was made based on feedback provided by a group of five experts and a group of eight students in separate sessions. The measure format was a scale composed of items that offer Likert-type alternatives, 5 points (1= totally disagree and 5= totally agree).

The pre-test was performed by applying the scale to 352 volunteer participants, medical students, chosen in a non-random way. According to Hair et al. (2009), the sample is compatible with the number of items. The sample is characterized by students

aged between 18 and 30 years. Students in the tenth semester were excluded due to the impossibility of carrying out a group application, including students from the first to the ninth semester.

The authors initially calculated Cronbach's alpha coefficient and then the authors performed a factor analysis to identify the items with the best performance and place a brief scale with a more acceptable psychometric behavior from the perspective of classical scale theory. Campo-Airas et al. (2016) used Bartlett's sphericity coefficients, the KMO sample adequacy coefficient for the various versions with the fewest possible number of items that would allow for a one-dimensional scale, and calculated the McDonald's omega. Through these results, the authors arrived at a Brief Scale of Moderate Racism, with 5 items distributed in one dimension.

The article "*The Symbolic Racism 2000 Scale*" by Henry and Sears (2002) aims to present and evaluate an updated scale of symbolic racism. The scale is called Symbolic Racism 2000 Scale (SR2K). The scale items were generated from previous studies on symbolic racism, modern racism, and subtle racism, that is, some items were removed exactly as they were in previous studies and others were adapted. The format of the measure was a scale composed of items that offer Likert-type alternatives (agree X disagree) and other items with alternatives different from this pattern, such as everything, nothing, etc. The authors did not inform whether there was an evaluation stage with specialists. However, they reported that some items were rejected due to low correlations or skewed frequencies. The scale items were validated using discriminant and predictive validity. The final scale had eight items. It is observed that the authors disregarded the multidimensionality of the racism construct when developing the Symbolic scale Racism 2000 Scale (SR2K).

The study entitled "*Ethnic-racial attitudes: Elaboration and evidence of validity of a measure of Brazilian racism*" by Fernandes and Pereira (2019) aims to investigate some

elements of racism in the framework of Brazilian racial relations and to elaborate a scale of ethnic attitudes -racial.

The authors did not inform the number of items before the analysis by specialists in the field, they only informed that they were distributed in five dimensions. However, the scale submitted to the pre-test contained 44 items divided into five dimensions: 1) phenotypic attributes; 2) psychological attributes; 3) historical-cultural attributes; (4) moral emotions in the face of prejudice; and 5) perception of the existence of prejudice.

The items were generated from data collection carried out with 678 university students from five Brazilian states. The objective was to analyze the contents referring to beliefs about the social category "blacks" in order to draw a mapping that would allow the knowledge of beliefs about blacks and about racial relations to then elaborate a scale on attitudes towards black people and the race relations. After that, two classes grouped into five factors were elaborated. There was also an analysis of expert judges on the topic addressed. This analysis aimed to establish the theoretical understanding of the items and their adequacy to the construct that it aims to measure. After the judges' analysis, the items that did not show at least 80% agreement between the judges were excluded. Then, its semantic validity was verified through analysis with the lowest stratum of the target population. In this case, the study had the participation of twelve students of both genders, in the first period of the Psychology course. Finally, after this evaluation, the indicated changes were made. The scale used offers Likert-type alternatives, 5 points (where 1 = totally disagree and 5 = totally agree).

The scale was submitted to a pre-test with 195 respondents. According to Hair et al. (2009), the sample is not compatible with the number of items, because in an initial scale of 44 items, at least 440 respondents should participate in the sample. In the case of the final scale, at least 240 respondents should participate. The sample is characterized by university students from the Psychology course at two universities in the city of Maceió (AL), most of whom are female, aged between 18 and 32, who

were studying up to the third period. In addition, the sample is not compatible with the target population for which the scale is developed, as the study aims to develop a scale to measure Brazilian racism. As the university context was not specified as the focus of the measure, the scale should have been applied in a general context as well, that is, all Brazilians.

Fernandes and Pereira (2019) performed factorial correspondence analysis (CFA); KMO and Bartlett's sphericity test. The authors performed a factor analysis of principal components, with varimax rotation, without specifying the number of factors. As a result, they obtained a structure composed of 13 factors, which highlighted the need to use the slope diagram (screeplot) as a criterion to assess the dimensionality of the construct. The result of the factorial analysis arranged in three factors showed two clearly predominant factors, one pertinent to beliefs about the existence of racial prejudice and a second pertinent to the combination of beliefs about natural phenotypic and psychological traits, and a third ambiguous factor where the items relevant both to what would be the beliefs about historical-cultural traits and about moral emotions in the face of prejudice. Items with a factorial load lower than 0.40 were excluded, as well as items saturated in both factors. The results showed a model composed of two dimensions, both factors composed of 12 items each. The authors calculated Cronbach's Alpha coefficient for each dimension, according to Hair et al. (2009). And the results demonstrate acceptable levels of internal consistency of the scale. The final scale had 24 items, divided into two dimensions. The authors did not inform which validations were performed on the scale. In addition, it is observed that the scale was developed for a general context, but the sample was in a specific context (university students). Therefore, to verify its adequacy in a general context, the authors should apply the scale to a new group of respondents.

The study entitled "*The perceived racism scale: a multidimensional assessment of the experience of white racism among African Americans*" by McNeilly et al. (1996) aims

to build a new instrument that captures the multidimensional experience of racism in African Americans. The scale measures the frequency of exposure to the types of racist incidents described and also includes dimensions of emotional and behavioral responses to coping with racism. The contents of the scale items were generated from a test data collection with 165 African-American students and 25 members of a community, through a scale composed of items that offer Likert-type alternatives. The authors reported that to build the items, the subjects were asked about experiences with racism and emotional and behavioral responses to face this racism. The situations, emotions, and behavioral responses listed by the participants were categorized into four domains: employment domain; academic domain; public domain; and racist statement. McNeilly et al. (1996) did not inform whether they carried out a review of the initial items by specialists in the field and also whether they included or excluded items after validation by these experts.

The scale was pretested with 20 African-American individuals (10 psychology students and 10 community members). The authors evaluated the reliability/internal consistency of the scale using Cronbach's Alpha for each dimension, according to Hair et al. (2009), and performed factor analysis of principal components, with varimax and promax rotation. The final scale consists of 51 items, divided into three dimensions.

The authors performed a reliability retest but did not validate the scale. It is observed that the scale was developed for a general context but for a specific location. Thus, to verify its adequacy in another context, the authors should apply the scale with a new group of respondents. It is also observed that the scale took into account the multidimensionality of the racism construct

Considering the foregoing, aligning with the aim of this investigation - to analyze the construction and validation of measures and scales concerning the concept of racism - it becomes apparent that while all instruments were crafted with a degree of clarity in measurement, improvements are still needed all aspects of the instruments analyzed to increase their reliability.

It appears that only the ethnic-racial attitudes scale created the set of items for the scale based on a literature review as well as through the researcher's creativity. The other scales originated their items from existing studies, through adaptation to a given context or replication of the respective items. All instruments demonstrate the scale measurement format, the majority being the Likert-type scale with variation in the number of points (from 5 to 7 points). Greater attention is suggested regarding the review of the initial items by specialists in the area, as well as the inclusion/exclusion of these items after the aforementioned validation.

Even given the importance of carrying out pre-tests with individuals who have characteristics similar to those of the population to be researched and the subsequent evaluation of the items through statistical analysis, the authors Henry and Sears (2002) did not carry out this step for the construction of the Scale of Symbolic Racism.

Furthermore, even given the multidimensional character of the racism construct, it is observed that Henry and Sears (2002) and Campo-Arias et al. (2016), disregard the theoretical dimensions of the racism construct in the construction of the respective scales. The other instruments captured and confirmed the multidimensionality of the racism construct by developing/adapting their respective instruments, in addition to presenting dimensions that meet the identified theoretical dimensions, namely: threat to the principles of equality and justice; denial of prejudice and discrimination; and affirmation of ethnic-racial differences.

CONCLUSIONS AND RECOMMENDATIONS

Considering the *mainstream* of social sciences, in order to know and analyze the existing measurement measures regarding the racism construct, Table 3 presents a schematic analysis of the construction process of the instruments for measuring/evaluating racism in comparison with the guidelines proposed by DeVellis (2017).

Table 3 – Analysis of the instruments for measuring the racism construct based on the guidelines proposed by DeVellis (2017)

Guidelines proposals per DeVellis (2017)	Modern Racism Scale				Symbolic Racism Scale	Ethnic-Racial Attitudes Scale	Perceived Racism Scale
	Navas (1998)	Santos et al. (2006)	Cárdenas (2007)	Campo-Arias et al. (2016)	Henry and Sears (2002)	Fernandes and Pereira (2019)	McNeilly et al. (1996)
Clarity of what is the intended measure	☑	☑	☑	☑	☑	☑	☑
Creating the Scale Item Set	X	X	X	X	X	☑	X
Determining the measurement/ response format	☑	☑	☑	☑	☑	☑	☑
Review of starter items by experts in the field	X	☑	X	☑	X	☑	X
Consider including validation items	X	☑	☑	X	☑	☑	X
Conducting pre-tests	☑	☑	☑	☑	X	☑	☑
Evaluation of items	☑	☑	☑	☑	X	☑	☑
Optimize scale size	X	☑	X	☑	☑	☑	☑

Source: Elaborated by the authors (2024)

Relying on theoretical assumptions of the racism construct and statistical recommendations according to the guidelines proposed by DeVellis (2017), this study analyzed the construction of six scales, presenting information on the generation of items, the sample-item ratio, characterization of respondents, as well as the statistical analyzes employed. The results were methodologically discussed, considering the construction of the scales and theoretically taking into account the theoretical dimensions of the racism construct.

As a limitation of this investigation, it is noteworthy that of all the analyzed studies there is a predominance of the Modern Racism Scale, although there are other instruments that address the racism construct. However, the other instruments could not compose the analysis corpus because they did not meet the inclusion criteria, especially regarding access to free articles. An alternative path for future studies may be the analysis of these scales that were not included in the scope of the present research and/or analysis of how the racism construct is measured in order to articulate quantitative studies with qualitative methods.

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REFERENCES

Almeida, Silvio Luiz de. (2020). *Racismo Estrutural.* São Paulo: Sueli Carneiro, Jandaíra, 255. (Plural Feminisms).

Burrell, G., Morgan, G. (1979). *Sociological paradigms and organizational analysis:* elements of the sociology of corporate life. Portsmouth: Heinemann Educational Books.

Campo-Arias, A., Herazo, E., & Oviedo, H. C. (2016). Valoración psicométrica de la Escala Breve para Racismo Moderno [Psychometric assessment of a brief Modern Racism Scale]. *Revista de salud publica* (Bogota, Colombia), 18(3), 437–446. https://doi.org/10.15446/rsap.v18n3.41291

Cárdenas, Manuel. (2007). *The Modern Racism Scale: Psychometric Properties and Its Relationship with Psychosocial Variables*. *Univ. Psychol.* , Bogotá , 6(2), 255-262. http://pepsic.bvsalud.org/scielo.p hp?script=sci_arttext&pid=S1657-9 2672007000200005&lng=pt&nrm=iso .

Cunha, M. P. E., Rego, A. (2019). Métodos qualitativos nos estudos organizacionais e de gestão. *Revista de Gestão dos Países de Língua Portuguesa*, 18(3), 188-206, 30 Dec.

Devellis, R.F. (2017). *Scale Development*: theory and applications. 4th. Sage. ed.

Ferenhof, H.A., Fernandes, R. F. (2016). Desmistificando a revisão de literatura como base para redação científica: Método SSF. *Revista ACB: Biblioteconomia em Santa Catarina*, Florianópolis, 21(3), 550-563, Aug./Nov. ISSN 1414-0594. https://revista.acbsc.org.br/racb/article/view/1194/pdf .

Fernandes, S. C. S., & Pereira, M. E. (2019). Atitudes étnico-raciais: elaboração e evidências de validade de uma medida do racismo à brasileira/Ethnic-racial attitudes: Elaboration and evidence of validity of a measure of Brazilian racism. *Psico*, 50(4), e28624. https://doi.org/10.15448/1980-8623.2019.4.28624 .

Hair Jr., J. F., Babin, B.J., Money, A.H., & Samouel, P. (2005). *Fundamentos de métodos de pesquisa em Administração.* Porto Alegre: Bookman.

Hair, J., Jr., et al. (2009). *Análise multivariada de dados.* (6th ed.). Porto Alegre, RS: Bookman

Hair, J.F. et al. (2019). Development and validation of attitudes measurement scales: fundamental and practical aspects. *RAUSP Management Journal*, 54(4), 490-507.

Henry, P. J., Sears, D. O. (2002). The symbolic racism 2000 scale. *Political Psychology*, 23, 253-283.

McConahay, J. B, et al. (1981). Has racism Declined in America?: It Depends on who is Asking and what is Asked. *Journal of conflict Resolution*, 25(4), 563–579. https://doi.org/10.1177/002200278102500401

McConahay, J. B. (1986). Modern racism, ambivalence, and the modern racism Scal. In: Dovidio, J.F, Gaertner, S.L. *Prejudice, discrimination, and racism*. Orlando: Academic Press, 91-125.

McNeilly, M. D. et al. (1996). The perceived racism scale: a multidimensional assessment of the experience of white racism among African. *Ethnicity & disease*, 6(1-2), 154–166; 1996. https://pubmed.ncbi.nlm.nih.gov/8882844/

Ministry of Education / Secretariat for Continuing Education, Literacy and Diversity. (2006). *Guidelines and Actions for Ethnic-Racial Relations Education.* Brasilia: SECAD.

Navas, Maria Loneliness. (1998). New measurement instruments for the new racism, *International Journal of Social Psychology*, 13:2, 233-239. https://doi.org/10.1174/021347498760350731

Nogueira, Renato. (2015). *Afroperspectivity:* for a philosophy that decolonizes. https://www.geledes.org.br/afroperspectividade-por-uma-filosofia-que-decoloniza/

Pacheco, L. C. (2015). Cordial racism - manifestation of Brazilian-style racial discrimination - the public and private domain. *Journal of Psychology*, 2(1), 137-144.

Pettigrew, T. F., Meertens, R.W. (1995). Subtle and blatant prejudice in western Europe. *European journal of social psychology* , 25, 57-75. https://doi.org/10.1002/ejsp.2420250106

Pioli, Barla L.T. et al. (2020). Authentic leadership: analysis of scientific production and measurement scales. *Ram, Rev. Adm. Mackenzie*, Sao Paulo, 21(3), and RAMG200126. https://doi.org/10.1590/1678-6971/eRAMG200126 .

Rother, E.T. (2007). Systematic review x narrative review. *Acta Paulista de Enfermagem,* São Paulo, 20(2), v-vi, Jun.

Sant'ana, Antônio Olímpio de. (2005). History and basic concepts about racism and its derivatives. In: Munanga, Kabengele (org.). Overcoming racism in Brazil. Brasilia: Ministry of Education, Secretary of Continuing Education, Literacy and Diversity. http://portal.mec.gov.br/secad/arquivos/pdf/racismo_escola.pdf .

Santos, Walberto Silva et al. (2006). Modern racism scale: adaptation to the Brazilian context. *Study Psychology* [online]. 11(3), 637-645. https://doi.org/10.1590/S1413-73722006000300020 .

Sousa Santos, B. (1988). A discourse on the sciences in the transition to a postmodern science. *Advanced Studies*, 46–71.

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4. Theoretical foundation / Literature review	√	√
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