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Escala de Detección de Sexismo en Adolescentes:

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Introduction

Sexism is linked to violence, particularly against women, and it is phenomenon that exists in all societies. The Committee of Ministers, Council of Europe (2019) considers that sexist attitudes contribute to a climate of intimidation, fear, and discrimination, and that they do not promote well-being among men and women. The models of masculinity and femininity perpetuated across generations have contributed to gender-based violence, thus the interventions for minimizing violence should be started during childhood and directed to both boys and girls (Santoro, Martínez-Ferrer, Monreal Gimeno, & Musitu, 2018).

Adolescents still internalize the belief that women and men are born with a set of attributes traditionally associated with femininity and masculinity, which constitutes a favorable condition for gender-based violence (Recio, Cuadrado, & Ramos, 2007). According to the authors, it is necessary to understand adolescents' system of beliefs, particularly those beliefs about the traits and attributes associated with men and women, and the distribution of gender roles to appropriately direct gender-based violence prevention programs.

The suggestion that interventions should be started during childhood is reinforced in the systematic review by Ramiro-Sánchez, Ramiro, Bermúdez, and Buela-Casal (2018), who found that the most sexist adolescents have a greater level of acceptance of intimate partner violence, more risky sexual behaviors, more attraction to sexist partners, greater emotional dependence on their partner, and experience an idealized love, revealing differences based on gender inequalities. Based on these results, the authors concluded that sexist attitudes are associated with unhealthy intimate relationships among adolescents. However, for the promotion of a non-sexist culture, reliable instruments are needed to assess the beliefs and traits of sexism. Thus, this study aimed to validate the Escala de Detección de Sexismo en Adolescentes (DSA) by Recio et al. (2007) into the Portuguese context, providing the scientific community with a valid instrument that is suitable for assessing sexism among adolescents.

Background

Sexism was initially defined as hostility against women; however, research in this field has led to an expansion of the concept. Swim and Hyers (2009) define sexism "individuals' attitudes, beliefs, and behaviors, and organizational, institutional, and cultural practices that either reflect negative evaluations of individuals based on their gender or support unequal status of women and men" (p. 407). This definition makes it clear that sexism is not restricted to individual attitudes, but also to institutional practices, and can reflect a negative attitude (Dovidio, Hewstone, Glick, & Esses, 2010; Barreto & Ellemers, 2013). In 2018, Ramiro-Sánchez et al. divided the concepts of sexism in two categories: traditional and new forms of sexism. The traditional forms consider sexism as an attitude of prejudice or discrimination against the other based on inferiority and difference of roles between men and women. The traditional forms of sexism are associated with the concept of *machismo*, which is understood as a set of beliefs, attitudes, and behaviors that demonstrate the superiority of men over women.

The new forms of sexism include benevolent sexism, which is characterized by a set of attitudes and behaviors towards women, who are seen as weak and fragile. It is perceived as emotionally positive because it implies that men protect women (Etchezahar & Ungaretti, 2014).

Both the traditional and the new forms of sexism emphasize the difference of roles between men and women and women's inferiority to men. The new forms of sexism are more difficult to eradicate due to their subtle nature because they are associated with a positive tone which makes it more likely to be accepted by women (Ramiro-Sánchez et al., 2018).

According to the literature, the different forms of sexism are associated with gender and age. Men show higher levels of sexism, mainly hostile sexism, than women (Costa, Oliveira, Pereira, & Leal, 2015; Rojas-Solís & Raimúndez, 2011) and younger individuals show more benevolent attitudes, while older individuals display more hostile attitudes (Costa et al., 2015). However, these authors have mentioned that other studies found more polarized and hostile attitudes among young people while adults tend to have more benevolent attitudes.

In view of the above, Recio et al. (2007) developed an instrument for assessing the traits of sexism among adolescents: the *Escala de Detección de Sexismo en Adolescentes* (DSA). This scale includes 26 items that assess adolescents' perspectives of the traditional roles and tasks assigned to women (domestic work, child and dependent care); the roles often attributed to men (public work, providing for the family economically); and aspects related to intimate and violent relationships. The DSA scale was built in Spain and validated with Spanish adolescents aged 14 to 17 years. For the total scale and the subscales, internal consistency values ranged from 0.80 to 0.92 (Recio et al., 2007).

Research question

Does the Portuguese version of the DSA scale has good psychometric properties for assessing traits of sexism among adolescents?

Methodology

A methodological study was conducted with a quantitative and cross-sectional approach. The cultural adaptation of the DSA scale followed the methodology of Beaton, Bombardier, Guillemin, and Ferraz (2000), using the translation/back-translation technique.

The cross-cultural adaptation of self-administered instruments for use in another country, culture or language requires a single method to obtain an equivalence between



the original and the translated version. This process of translation and systematic validation followed the five steps recommended by Beaton et al. (2000). In step 1, two translators translated the DSA scale from Spanish into Portuguese, followed by a synthesis of the translations (step 2). The back-translation from Portuguese into Spanish was also performed by two independent translators with a proficiency in Spanish, based on the first consensus version. Based on both versions, a single back-translation was produced (step 3). In step 4, all written reports were reviewed to resolve possible discrepancies and obtain the pre-final version. Finally, a meeting was held between four experts (faculty members with pedagogical and research activity in this topic) and the researchers, where the original scale, the translations, and the written reports on previous decisions were analyzed to reach consensus on discrepancies. Thus, the operability of the scale was achieved, as well as the final version of the scale applied in the study (step 5).

Instrument

The data collection tool included: 1) Demographic variables: age, gender, and place of residence; 2) the DSA scale resulting from the translation and adaptation to the Portuguese context of the authors Recio et al. (2007). This scale consists of 26 items: 16 items to measure hostile sexism (HS) and 10 items to measure benevolent sexism (BS). The items were rated on a 6-point Likert type scale (1 - totally disagree; 2 - moderately disagree; 3 - disagree; 4 - agree; 5 - moderately agree; and 6 - totally agree). To rate the scale, the scores in the two subscales must be calculated through the mean score of the corresponding items. A total score of the traits of sexism can also be obtained through the total mean of scores. The results should be interpreted taking into account that high scores in the HS and BS subscales reveal sexist and stereotypical attitudes; high scores in the HS subscale reveal that this belief is clearly negative; and high scores in the BS subscale reflect women's subordination supposedly to receive affection and protection.

The nonprobability, convenience sample comprised 259 adolescents attending the 9th grade in two school clusters of the central region of Portugal. The sample was composed of 48.3% of boys and 51.7% of girls aged 13 to 19 years (Mean = 14.15; SD = 0.92).

Formal and ethical procedures

A request for permission to translate and validate the DSA scale into Portuguese was sent to the authors of the original scale (Recio et al., 2007), who replied favorably.

A set of formal and ethical procedures were essential for data collection: prior registration (Process no. 13755/215) and favorable opinion of the Portuguese Data Protection Authority (CNPD); authorization of the Ministry of Education, based on the register made in September 2015 (No. 0252500002) in the platform for monitoring surveys in schools (MIME); request for opinion to the Ethics Committee of the Health Sciences Research Unit: Nursing (UICISA:E), which was favorable (Opinion No. 297/08-2015); authorization of the school clusters; after being informed about the study, students' parents/ guardians were asked permission for their children to participate and asked to sign an informed consent form; and students whose parents/guardians authorized their participation were also asked to sign an informed consent form at the time of data collection.

Data were collected in the classroom at a time schedule planned for that purpose and under the supervision of researchers and teachers. Participants' anonymity and data confidentiality were ensured.

The adaptation of the scale into Portuguese followed a two-step methodology: first, the translation and cultural adaptation of the scale and then an Exploratory Factor Analysis (EFA).

Data were analyzed using an EFA performed in IBM SPSS Statistics, version 21.0, to determine the number of factors to retain, the number of corresponding items, and their internal consistency.

EFA is useful to estimate common factors if there is high inter-variable correlations. To determine it, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were used because they allow assessing the quality of the correlations and decide on whether to perform a factor analysis. A KMO greater than 0.6 is and a significant Bartlett's test are recommended (Worthington & Whittaker, 2006).

Results

With regard to internal consistency, the psychometric study revealed a high Cronbach's alpha of 0.931 for all 26 items rated on the Likert-type scale, scored from 1 to 6. The corrected item-total correlation ranged from 0.418 to 0.697, with the exception of item 1 "Women are, by nature, more patient and tolerant than men", whose correlation was 0.356 (Table 1). Nevertheless, this item was maintained because the Cronbach's alpha coefficient (0.932) would not increase significantly if it was deleted, thus the structure of the original scale was maintained.



Scale items	Corrected item-total correlation	Cronbach's Alpha (if item deleted)	
Item 1	0.356	0.932	
Item 2	0.585	0.928	
Item 3	0.533	0.929	
Item 4	0.501	0.930	
Item 5	0.525	0.929	
Item 6	0.487	0.930	
Item 7	0.537	0.929	
Item 8	0.586	0.928	
Item 9	0.682	0.927	
Item 10	0.629	0.928	
Item 11	0.545	0.929	
Item 12	0.542	0.929	
Item 13	0.554	0.929	
Item 14	0.680	0.927	
Item 15	0.613	0.928	
Item 16	0.712	0.927	
Item 17	0.418	0.931	
Item 18	0.638	0.928	
Item 19	0.615	0.928	
Item 20	0.638	0.928	
Item 21	0.451	0.931	
Item 22	0.697	0.927	
Item 23	0.672	0.927	
Item 24	0.565	0.929	
Item 25	0.681	0.927	
Item 26	0.448	0.931	
Total Cronbach's Alpha	0.931		

Table 1Internal consistency of the Portuguese version of the DSA scale

Note. DSA = Escala de Detección de Sexismo en Adolescentes

In the study of construct validity, the KMO measure (KMO = 0.932) and the Bartlett's test ($X^2 = 3463,848$; *p* < 0.001) were used and then the EFA was conducted using the principal components method with orthogonal varimax rotation and Kaiser normalization.

An EFA was performed in which the inter-item correlation matrix was initially subjected to a principal components analysis, which extracted four factors with eigenvalues greater than one, accounting for 58.01% of the total variance of the instrument. However, the scree plot showed that the ideal number of factors to be extracted was two. Thus, taking into account that the original version also had two subscales (HS and BS) and that two of those factors accounted for less than 5% of explained variance, the two-factor solution was used, as in the original version. Then, a factor analysis was performed by forcing a two-factor solution, using orthogonal varimax rotation. These factors explained 49.09% of total variance and retained the items with factor loadings greater than or equal to 0.35 (Table 2).



Table 2

Factor loadings and communalities (h^2) of the items of the portuguese version of DSA scale

		Factor 1		Factor 2	
Items	Factor loadings	h²	Factor loadings	h²	
Item 2 - The most suitable place for women is at home with their family.	0.50	0.39			
Item 4 - Women are weaker than men in all aspects.	0.51	0.32			
Item 5 - A positive measure to end unemployment would be for women to stay at home.	0.66	0.44			
Item 7 - It is more natural for the daughters to care for the elderly parents than for the sons.	0.35	0.37			
Item 9 - Housework is a women's obligation.	0.78	0.64			
Item 10 - Women have to be put in their place so they don't dominate men.	0.76	0.60			
Item 12 - Women are manipulative by nature.	0.56	0.37			
Item 14 - Men must be the main source of income for their family.	0.70	0.57			
Item 16 - The husband is the head of the family and the wife must respect his authority.	0.78	0.66			
Item 18 - Household chores are not a men's responsibility.	0.70	0.54			
Item 19 - Women reason worse than men.	0.78	0.61			
Item 20 - Men are more qualified for the public sphere than women (e.g., politics, business, etc.).	0.72	0.56			
Item 22 - Women who work outside the home neglect their family.	0.76	0.63			
Item 23 - Men must make the most important decisions in the couple's life.	0.76	0.62			
Item 25 - A wife must be willing to sacrifice herself for her husband's professional success.	0.78	0.64			
Item 26 - A man should talk to his wife with affection, but firmly.	0.36	0.24			
Item 1 - Women are by nature more patient and tolerant than men.			0.70	0.50	
Item 3 - Love and affection are more important for women than for men.			0.57	0.40	
Item 6 - Women are better prepared than men to please others (listen to what they want and need).			0.66	0.46	
Item 8 - Women are more compassionate towards their partner than men because of their greater sensitivity.			0.78	0.64	
Item11 - No one can raise their children better than women.			0.62	0.45	
Item 13 - Women are more prepared to forgive their partner's faults than men.			0.81	0.67	
Item 15 - A fragile woman has a special charm for men.			0.46	0.44	
Item 17 - Women are by nature more sensitive than men.			0.58	0.35	
Item 21 - Women are irreplaceable at home.			0.45	0.27	
Item 24 - Women are by nature better prepared to endure suffering than men.			0.55	0.42	

Note. DSA = Escala de Detección de Sexismo en Adolescentes. h² = Communalities.

Factor 1 (HS) was composed of 16 items and had an eigenvalue equal to 10.09, being responsible for 38.34% of total variance. Factor 2 (BS) was composed of 10 items, which accounted for 10.25% of total variance, and had an eigenvalue equal to 2.67. The analysis of the internal consistency of these factors revealed Cronbach's alpha values equal to 0.926 and 0.853, respectively.

Table 3 shows the analysis of the differences between adolescents according to gender in the Portuguese version of the DSA scale. Male adolescents scored higher than female adolescents in the total scale, although these differences were not statistically significant ($t_{(257)} = 1.234$, p = 0.218). In the HS subscale, male adolescents scored significantly higher than female adolescents ($t_{(257)} = 3.626$, p < 0.001). This pattern is reversed in the BS subscale, where the mean scores of male adolescents are significantly lower than those of female adolescents ($t_{(257)} = -2,526$, p = 0.012).



Table 3

Means and standard deviation of the DSA	A_pt scale and subscales in the total sample and by gender
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	Total s	Total sample		Male		Female	
DSA_pt scale	Mean	SD	Mean	SD	Mean	SD	
Hostile Sexism (16 items)	2.20	0.91	2.41	1.01	2.02	0.75	
Benevolent Sexism (10 items)	3.16	0.97	3.01	1.01	3.31	0.93	
DSA_pt Total	2.57	0.84	2.64	0.94	2.52	0.73	

Note. DSA_pt = Escala de Detección de Sexismo en Adolescentes, Portuguese version; SD = standard deviation.

Age was directly correlated with sexism, that is, as students' age increases, so do the sexism scores (r = 0.188; p = 0.003).

In the HS subscale, a direct correlation was also found between sexism and age (r = 0.216; p = 0.000; Table 4).

 Table 4

 Pearson's correlation between age and the scores in the DSA_pt scale and subscales

DSA_pt scale	Age Pearson's correlation	<i>— P</i> value
DSA_pt	0.188	0.003
DSA_pt (hostile sexism)	0.216	0.000
DSA_pt (benevolent sexism)	0.099	0.114

Note. DSA_pt = Escala de Detección de Sexismo en Adolescentes, Portuguese version.

In view of the results found in the validation of the scale for the Portuguese population, these findings should be examined in the light of scientific evidence.

Discussion

The objective of this study was to translate and adapt the DSA scale (Recio et al., 2007) for the Portuguese context. Based on these results, it can be concluded that the Portuguese version of the DSA scale has good psychometric properties, keeping the same items and subscales (HS and BS) of the original version. After analysis of explained variance, both subscales remained the same as in the original version because, after the factor analysis forcing a two-factor solution, the factors explained 49% of total variance and the factor loadings were equal to or higher than 0.35. This decision was in line with that of Bezada Morales (2017). Internal consistency scores of the scale and its two subscales are high and consistent with the scores found in other studies. With regard to the total scale, the Cronbach's alpha value found in this study was 0.931, which is higher than the one found by Recio et al. (2007; 0.90) and Bezada Morales (2017; 0.888). As regards the HS subscale, the value found was 0.926, which is similar to the values found by Recio et al. (2007; 0.92) and Bezada Morales (2017; 0.872). In the BS subscale, the value found was 0.853, which is lower than the value found in the HS subscale but higher than the one found by Recio et al. (2007; 0.80) and Bezada Morales (2017; 0.747). With regard to the correlations between the DSA scale and gender, no statistically significant differences were found, even though male adolescents scored higher than female adolescents. As regards HS, the values are higher in male adolescents, with a statistically significant difference when compared to female adolescents. In relation to BS, the results are reversed, that is, male adolescents scored significantly lower than female adolescents, with this difference being statistically significant. These results are consistent with those found by Recio et al. (2007) and Bezada Morales (2017). Thus, it can be said that female adolescents reject HS beliefs more strongly than male adolescents but accept BS beliefs more easily.

These results draw attention to the need to unveil the different forms of sexism, especially benevolent sexism. They are even more relevant for female adolescents, because it can help legitimize gender stereotypes associated with affective manifestations that are regarded as positive. These results reinforce the need for interventions aimed at the prevention of sexism among adolescents, with a special emphasis on unveiling the different forms of BS (Mamani, 2017). This study also found a correlation between sexism and age, that is, sexism, especially HS, increases as adolescents' age increases. These results are consistent with those found by Recio et al. (2007) and support the need for interventions to prevent sexism in earlier stages of adolescence, given that both beliefs and stereotypes tend to intensify with age.

The use of a nonprobability sample was a limitation of this study.

Conclusion

In the literature, sexism is defined as a classic form of hostility against women that reinforces the traditional



gender roles, increases with age, legitimizes violence in intimate relationships, increases the risk of sexual violence, and leads to the development of intimate relationships with sexist partners, greater emotional dependence on the partner, poorer quality in relationships, and myths of idealized love. Therefore, the development an instrument for assessing sexism in adolescents is essential for the implementation of interventions in these areas.

The Portuguese version of the DSA scale has good psychometric properties for assessing sexism in general and HS and BS in Portuguese adolescents. Thus, this study of validation of the DSA scale is particularly important because there are no other instruments already validated for this Portuguese population available in the literature. Further studies should be conducted to assess the psychometric properties of the Portuguese version of the DSA scale in other samples of Portuguese adolescents.

Author contributions

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