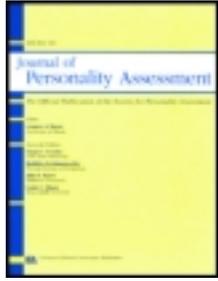


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### Clinical Utility of the Bem Sex Role Inventory (BSRI) in the Spanish Transsexual and Nontranssexual Population

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## Clinical Utility of the Bem Sex Role Inventory (BSRI) in the Spanish Transsexual and Nontranssexual Population

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The aim of the study is to evaluate the usefulness of the Bem Sex Role Inventory (BSRI; Bem, 1974), an overall measurement of the cultural construct of masculinity and femininity, in the psychological assessment of Spanish transsexuals. Seventy male-to-female transsexuals (MF), 51 female-to-male transsexuals (FM), 77 control men, and 79 control women completed the Spanish version of the BSRI. Statistically significant differences between groups were only found on the femininity scale, on which MF transsexuals and control women scored significantly higher than FM transsexuals and control men. The results indicate that (a) only the femininity scale of the BSRI appears to be useful today for evaluating differences in the sex-role identification in Spanish controls and transsexuals; and (b) MF and FM transsexuals score as a function of their gender identity instead of their anatomical sex on the BSRI femininity scale.

Gender identity disorder (GID) of adulthood or adolescence (see the *Diagnostic and Statistical Manual of Mental Disorders* [4th ed., text revision; *DSM-IV-TR*]; American Psychiatric Association, 2000), also known as transsexualism (*International Classification of Diseases* [10th ed.; *ICD-10*]; World Health Organization, 1993), is characterized by strong and persistent cross-gender identification as well as persistent discomfort with the anatomical sex or a sense of inappropriateness in the gender role of that sex. This disorder is usually accompanied by the wish to make one's body as congruent as possible with the preferred sex through surgery and hormone treatment (World Health Organization, 1993).

An area of interest in the research of the topic of transsexualism is the assessment of gender identity through standardized scales, inventories, and structured psychiatric interviews. Gender identity is defined as a basic phenomenological sense of one's maleness or femaleness that parallels awareness and acceptance of one's anatomical sex, and it is established early in life (Spence, 1984). Transsexual individuals, whose gender identity is incongruent with their anatomical sex, identify with gender roles of the opposite anatomical sex (Gómez-Gil & Esteva de Antonio, 2006).

Some scales have been developed specifically for transsexual individuals to assess gender identity and other related aspects, including the Gender Identity Questionnaire (Richter-Appelt, Discher, & Gedrose, 2005), the Utrecht Gender Dysphoria Scale (Cohen-Kettenis & van Goozen, 1997), and the Gender Identi-

tity/Gender Dysphoria Questionnaire (Deogracias et al., 2007). However, an important limitation of such approaches is that they do not permit comparisons between transsexuals and nontranssexual controls. A more promising alternative has been to employ assessment instruments created to measure gender-related personality traits in the general population that arises from the field of gender differences research.

The most popular and commonly used psychometric instruments in the assessment of transsexual patients have been the fifth scale (Masculinity/Femininity) of the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1940), the Personal Attributes Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1974), and the Bem Sex Role Inventory (BSRI; Bem, 1974). However, currently, the research reporting results about the application of these inventories to the growing clinical population of transsexuals remains rare, and cross-cultural comparison is even less often seen. To extend this line of research, the main goal of this study is to evaluate the usefulness of one of these measurements of the cultural construct of masculinity and femininity (i.e., the BSRI), in the psychological assessment of Spanish transsexuals.

To justify our goals we begin by introducing the most commonly used questionnaires to assess masculinity and femininity in the transsexual population. However, some terminology needs to be clarified before continuing with this work, to help explain the distinction between sex and gender roles, and also between masculine and feminine traits.

Advances in the last three decades of research in the field of human sex differences make it necessary to clarify the distinctions between sex (role) and gender (role). Whereas *sex* refers to the classification of male or female according to a person's reproductive organs and the function assigned by the chromosomal component, *gender* refers to a person's self-representation

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as a man or a woman that includes the social and cultural influences in his or her cognition, emotion, behavior, and choices (Wizemann, 2001). Actually, the influence of biological and cultural factors tends to be assumed in the study of gender differences. Many authors use *gender* for constructs that are social and *sex* for constructs that are biological. Nevertheless, most of the authors use the terms *sex* and *gender* interchangeably (Hines, 2002). Because the goal of this article is to test the scale by Bem, who, as many others, would prefer the term gender, we use this term throughout. *Masculinity* and *femininity* refer to certain traits and behaviors that each culture associates with one gender or the other (Twenge, 1999).

The oldest and most applied questionnaire to the transsexual population has been the fifth scale on the MMPI (Hathaway & McKinley, 1940) and the MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989). This questionnaire considers masculinity and femininity to be opposite poles on a single continuum, and a single score on scale 5, Masculinity-femininity (Mf), shows these characteristics. Several investigations have found high scores on the Mf scale in male-to-female (MF) and female-to-male (FM) transsexuals (Caron & Archer, 1997; Cole, O'Boyle, Emory, & Meyer, 1997; Gómez-Gil, Vidal-Hagemeijer, & Salamero, 2008; Greenberg & Laurence, 1981; Hunt, Carr, & Hampson, 1981; Leavitt & Berger, 1990; Miach, Berah, Butcher, & Rouse, 2000; Michel et al., 2002). Therefore, these studies suggested that MF transsexual patients comply with cultural stereotypes of femininity and FM transsexuals with stereotypes of masculinity. However, the measurement with a single score implies that the presence of masculinity or femininity entails the absence of the opposite. For example, if the individual's score falls at the masculine end of the continuum, he or she is described as being only masculine and not feminine. Therefore, many criticisms have been directed at this methodological approach.

In contrast to the MMPI, the PAQ (Spence et al., 1974) and the BSRI (Bem, 1974) consider masculinity and femininity to be two independent unipolar dimensions, and a separate masculinity (M) scale and femininity (F) scale are considered. Masculinity is defined in terms of instrumental personality traits (e.g., competitive, ambitious, acts as a leader, dominant, independent, assertive, etc.) and femininity is defined in terms of expressive traits (e.g., affectionate, childlike, gentle, warm, shy, sensitive to the needs of others, etc.). Moreover, the PAQ and BSRI are based on the idea that masculinity and femininity can coexist to some degree in every individual (Spence & Helmreich, 1978).

Only two investigations have applied the PAQ to a transsexual population (Fleming, MacGowan, & Salt, 1984; Lippa, 2001). Fleming et al. found that FM transsexuals scored higher than control men on the F scale, but not on the M and M-F scales. Therefore, the FM transsexuals did not adhere strongly to stereotypically masculine roles and, at the same time, they did not reject stereotypically feminine characteristics. They concluded that gender identity and gender roles are not inexorably linked for all transsexuals. Lippa applied not only the PAQ, but also a questionnaire that assessed male- versus female-typical occupational and hobby-preference ratings. He found significant differences between MF transsexuals and control men for all PAQ, occupational, and hobby-preference questionnaires. Nevertheless, effect sizes were very large for gender differences based on hobby preferences but only moderate based on PAQ scores. In FM transsexuals, he found significant differences in

occupational and hobby-preference questionnaires, but not in the PAQ scores. Thus, they displayed extremely male-typical patterns of occupational and hobby preferences. Nevertheless, he used a small sample size of 7 FM transsexuals. The author concluded that the M and F scales of the PAQ did not strongly distinguish transsexuals from controls, nor did they strongly distinguish men from women.

To summarize, previous work seems to agree that both the MMPI and the PAQ have important limitations in their use in the transsexual population in particular.

To the best of our knowledge, few investigations have applied the BSRI to the transsexual population (Fleming, Jenkins, & Bugarin, 1980; Herman-Jeglinska, Grabowska, & Dulko, 2002; Skrapec & MacKenzie, 1981). However, as Herman-Jeglinska et al. stated, these investigations only considered one sex (Skrapec & MacKenzie, 1981), or did not include a control group (Fleming et al., 1980). Herman-Jeglinska et al. solved these limitations with a Polish transsexual population and included not only MF and FM transsexuals, but also control groups. The authors reported significant differences in both the M and F scales between transsexuals and controls. MF transsexuals scored lower on the M scale than control men but not lower than control women, and on the F scale higher than control men and women. FM transsexuals scored higher on the M scale than control women but not differently from men, and on the F scale lower than control women but higher than control men. To summarize, MF transsexuals scored as control women and FM transsexuals as control men in both the M and F scales. However, findings from Herman-Jeglinska et al. have not been replicated cross-culturally, so it would be too risky to generalize these findings.

Importantly, previous research demonstrated that responses to this questionnaire are sensitive to cultural differences. This inventory was developed by Bem based on Euro-American gender stereotypes in 1974, and, as well as being different across cultures, the concept of masculinity and femininity has changed. Thus, Moya, Poeschl, Glick, Páez, and Fernández-Sedano (2005), in a transcultural study with participants who responded to the BSRI, reported differences between men and women only in the M scale in four nations (China, Salvador, France, and Peru), only in the F scale in nine nations (Argentina, Brazil, Belgium, Bolivia, Chile, Colombia, Spain, Switzerland, and Turkey), in both scales in seven nations (Italy, Mexico, Portugal, Russia, Lebanon, United States, and Venezuela), and in no scale in nine nations (Germany, Ghana, Nigeria, Greece, Guatemala, Iran, Panama, Singapore, and Taiwan). These findings support the hypothesis that gender stereotypes and, therefore, the self-constructions of M and F, are related to the social context and to cultural values (Fernández, Páez, & González, 2005). Hence, it is not clear if this inventory is still useful now to distinguish gender-role identification in the transsexual and control population in any culture, and if it could be useful in the assessment of transsexual patients in clinical practice.

To extend this line of research, the main goal of this study is to evaluate the clinical usefulness of one of these measurements of the cultural construct of masculinity and femininity (i.e., the BSRI) in the psychological assessment of Spanish transsexuals. Because previous data on the Spanish general population found differences between men and women only in the F scale (Moya et al., 2005), we hypothesized that only the F scale of the BSRI would be a useful tool for assessing differences in gender roles not only in controls, but also in transsexuals. Second, according

to previous findings (Herman-Jeglinska et al., 2002), we predicted that transsexuals would score on the BSRI as a function of their gender identity instead of their anatomical sex. More specifically, whereas MF transsexuals should score as control women in the M and F scales, FM transsexuals should score as control men in these scales.

To explore these hypotheses, we evaluated the BSRI responses in MF and FM transsexuals and compared the results with men and women controls.

METHOD

Participants

The sample included 70 MF transsexuals, 51 FM transsexuals, 77 control men, and 79 control women who voluntarily participated in this study. The transsexual sample was selected consecutively at the Hospital Clinic of Barcelona. This public hospital is the only center providing specialized and comprehensive psychiatric, psychological, endocrine, and surgical treatment for transsexual patients in Catalonia, Spain. The sociodemographic characteristics of this population have already been reported (Gómez-Gil, Trilla, Salamero, Godás, & Valdés, 2009), and some of them are presented in Table 1. Gender identity disorders were diagnosed using the *DSM-IV-TR* (American Psychiatric Association, 2000) and the *ICD-10* criteria (World Health Organization, 1993). For all cases of transsexualism included in this report, two experts agreed on the diagnosis. The gender identity team at the Hospital Clinic has adopted the guidelines of the Standards of Care of the World Professional Association for Transgender Health, formerly known as the Harry Benjamin International Gender Dysphoria Association (Meyer et al., 2001). Control men and women were recruited among the general population that visited the Hospital Clinic in Barcelona as patient attendants.

Instrument

The BSRI (Bem, 1974) consists of 60 self-rated personality-related items empirically identified by Bem as associated with Euro-American gender stereotypes. There are 20 masculine items, 20 feminine items, and 20 items that are gender neutral. Participants are not informed that these characteristics are gender related. Ratings are made on a scale ranging from 1 (*never or almost never true of oneself*) to 7 (*always or almost always true of oneself*). The inventory contains three independent scales for the domains of masculinity (M), femininity (F),

and social desirability (SD). The theoretical assumption of this widely used inventory is that both men and women have masculine and feminine gender attributes. Following Bem's original median split method, by using the medians of F and M scales from our sample, individuals can be categorized as masculine sex-typed (high on masculinity and low on femininity), feminine sex-typed (high on femininity and low in masculinity), androgynous (high on both scales), or undifferentiated (low on both). The Spanish adaptation of the BSRI was made by Fernández (1983) obtaining a Cronbach's alpha of .77 for the M scale and .79 for the F scale.

Procedure

MF and FM transsexuals responded to the BSRI during a visit to the psychiatrist or psychologist of the gender team. All transsexuals selected were sexually attracted to individuals with the same original biological sex. Sexual orientation was established by asking what partner (a man, a woman, both, or neither) the patient would prefer or feel attraction to if they were completely free to choose and the body did not interfere.

Men and women controls responded to the BSRI individually in the psychiatrist's office of the gender team. All controls selected were sexually attracted to the opposite anatomical sex (heterosexuals), and they responded to the BSRI. All participants, controls and transsexuals, were also asked about their age and educational level.

Data Analysis

Data were analyzed using the SPSS software ver. 15.0 for Windows (SPSS Inc., Chicago, IL, USA). Between-groups comparison of quantitative variables was performed using a multivariate analysis of covariance (MANCOVA), with age and education controlled for independent samples. Between-groups comparison of categorical variables was performed using the chi-square analysis and comparisons of proportions. We reported effect size by Cohen's (1988) *d* for the two focused contrasts of primary interest: MF versus FM transsexuals and control men versus control women. For the chi-square results the relevant 2 × 2 comparison was computed and converted to *r*, and then *r* was converted to Cohen's *d*. In behavioral science research, *d* values of 0.2 are considered small, those of 0.5 moderate and those of 0.8 or greater, large values (Cohen, 1988). The level of significance was set at *p* < .05.

TABLE 1.—Demographic characteristics of male-to-female and female-to-male Spanish transsexuals and the control groups.

	MF Transsexuals <sup>a</sup>		FM Transsexuals <sup>b</sup>		Control Men <sup>c</sup>		Control Women <sup>d</sup>		Statistical Comparisons	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i> Value
Age	31.2	10.6	29.9	7.9	34.1	10.5	31.2	8.8	2.11	.10
Educational level	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	$\chi^2$	<i>p</i> Value
Primary school	42	60.0%	38	74.5%	46	59.7%	44	55.7%	1.34	.26
High school	21	30.0%	8	15.7%	21	27.3%	23	29.1%		
University	7	10.0%	5	9.8%	10	13.0%	12	15.2%		

Note. MF = male-to-female; FM = female-to-male.  
<sup>a</sup>*n* = 70. <sup>b</sup>*n* = 51. <sup>c</sup>*n* = 77. <sup>d</sup>*n* = 79.

TABLE 2.—Means and standard deviation of male-to-female transsexuals, female-to-male transsexuals, control men, and control women, on the masculinity, femininity, and social desirability scales.

	MF Transsexuals <sup>a</sup>		FM Transsexuals <sup>b</sup>		Control Men <sup>c</sup>		Control Women <sup>d</sup>		MANCOVA		MF vs. FM Effect Size	CM vs. CW Effect Size
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i> Value	Cohen's <i>d</i>	Cohen's <i>d</i>
Masculinity scale	4.71	.75	4.80	.73	4.79	.75	4.63	.75	.66	.575	.12	.21
Femininity scale	5.29	.73	5.01	.78	4.89	.62	5.26	.80	4.81	.003	.37	.51
Social desirability	4.84	.65	4.71	.62	4.61	.43	4.70	.58	1.90	.130	.20	.18

Note. MF = male-to-female; FM = female-to-male; MANCOVA = multivariate analysis of covariance; CM = control men; CF = control women.

<sup>a</sup>*n* = 70. <sup>b</sup>*n* = 51. <sup>c</sup>*n* = 77. <sup>d</sup>*n* = 79.

## RESULTS

The main demographic characteristics of the sample are given in Table 1. The four groups were not significantly different for age and educational level.

As shown in Table 2 first cite here, the MANCOVA using age and educational level as covariates yielded a significant effect of group on the *F* scale, but not on either the *M* or *SD* scales. Inspection of means on the *F* scale showed that, as expected, control women scored significantly higher than control men,  $t(154) = 3.28, p < .001$ , and marginally higher than FM transsexuals,  $t(128) = 1.92, p < .06$ , but not as compared to MF transsexuals,  $t(148) = -.32, p > .75$ . In addition, MF transsexuals scored significantly higher on the *F* scale than the FM transsexuals,  $t(119) = 2.22, p < .05$ , and the control men,  $t(145) = 3.64, p < .001$ . The results were similar with and without the covariates. The effect size for the differences on means in the *F* scale was moderate when comparing control men and women ( $d = 0.51$ ) and small when comparing MF and FM transsexuals ( $d = 0.37$ ). The main effects of age and education were not significant in any of the three scales of the BSRI when they were entered in the analyses (all *F*s < 1.89 and all *p*s > .17). In addition, there were no significant correlations between the demographic and any of the BSRI variables (all *r*s < .06 and all *p*s > .31). These results indicate that MF transsexuals and control women are the groups who score higher on the *F* scale.

Following Bem's original median split method, but using the medians of *F* and *M* scales from our sample, respondents were categorized as masculine gender-typed, feminine gender-typed, androgynous, or undifferentiated. The median values from this sample used to create the four groups were 4.73 ( $SD = .74$ ) for the *M* scale and 5.13 ( $SD = .75$ ) for the *F* scale. The frequency distribution of the four groups in the Bem's categories reached statistical significance,  $\chi^2(9, N = 277) = 23.30, p < .01$ . Table 3 displays the *n* and percentage (%) of participants from each group distributed in the four categories. As shown in Table 3, there were differences in the percentage of the masculinity

and the femininity categories between groups. The percentages of FM transsexuals and control males were higher in masculine sex type than the percentages of MF transsexuals and control females, respectively. In addition, the percentage of control females in feminine sex type was higher than the percentage of control males. However, there were no significant differences for either the percentages of the androgynous category or the undifferentiated category between groups. Importantly, the distribution of MF transsexuals across the four BSRI categories did not differ significantly from control women,  $\chi^2(3, N = 149) = 2.39, p > .49$ , and the distribution of FM did not differ from control men,  $\chi^2(3, N = 128) = .71, p > .97$ .

## DISCUSSION

This study investigated the clinical utility of an overall measurement of the cultural construct of masculinity and femininity (i.e., BSRI) in the psychological assessment of Spanish transsexuals. As expected, only the *F* scale of the BSRI is useful for assessing differences in gender roles, not only in controls, but also in transsexuals.

These findings replicate previous research in at least two ways: (a) findings referring to differences between transsexuals and controls indicate that, as in a previous Polish survey (Herman-Jeglinska et al., 2002), transsexuals scored on the BSRI as a function of their gender identity instead of their anatomical sex, and (b) findings referring to differences between the control groups replicate those obtained by Moya et al. (2005), and indicate that only the *F* scale might be useful currently to discriminate between Spanish men and women.

Our study supports earlier evidence for differences on the *F* scale of the BSRI between transsexuals and controls (Fleming et al., 1980; Herman-Jeglinska et al., 2002). Nevertheless, in contrast with our results, previous work also found differences in the *M* scale. This dissimilarity on the *M* scale might reflect the cultural differences among the Spanish, American, and Polish populations.

TABLE 3.—Number and percent of male-to-female transsexuals, female-to-male transsexuals, control men, and control women, in sex-role categories.

	MF Transsexuals <sup>a</sup>		FM Transsexuals <sup>b</sup>		Control Men <sup>c</sup>		Control Women <sup>d</sup>		Statistical Comparisons		MF vs. FM Effect Size	CM vs. CW Effect Size
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	$\chi^2$	<i>p</i> Value	Cohen's <i>d</i>	Cohen's <i>d</i>
Masculine sex-typed	7	10.0	11	21.6	21	27.3	12	15.2	8.22	.042	.26	.22
Feminine sex-typed	13	18.6	5	9.8	5	6.5	20	25.3	14.58	.002	.20	.42
Androgynous	31	44.3	15	29.4	25	32.5	30	38.0	6.37	.090	.18	.07
Undifferentiated	19	27.1	20	39.2	26	33.8	17	21.5	2.19	.530	.16	.18

Note. MF = male-to-female; FM = female-to-male; CM = control men; CW = control women.

<sup>a</sup>*n* = 70. <sup>b</sup>*n* = 51. <sup>c</sup>*n* = 77. <sup>d</sup>*n* = 79.

Our results also agree with the results of Fleming et al. (1984) using the PAQ. They found that FM transsexuals scored higher than control men only on the F scale. Unfortunately, this research did not include MF transsexuals. Moreover, some authors have reported a lack of congruence between scores obtained with the BSRI and the PAQ (Fernández, Quiroga, del Olmo, & Rodríguez, 2007).

Our results are also in line with results in several MMPI studies suggesting that MF transsexuals comply with cultural stereotypes of femininity and FM transsexuals with cultural stereotypes of masculinity (Caron & Archer, 1997; Cole et al., 1997; Gómez-Gil et al., 2008; Greenberg & Laurence, 1981; Hunt et al., 1981; Leavitt & Berger, 1990; Miach et al., 2000; Michel et al., 2002). Nevertheless, the MMPI is based on the assumption that masculinity and femininity are opposite ends of a unidimensional continuum, and it does not consider M and F to be two independent dimensions.

As a test of the convergent validity of our findings, our study also replicates previous work with control men and women. Our participants in the control group showed a pattern that agreed with the transcultural study of Moya et al. (2005). In that study, with a large Spanish sample, they found significant differences between men and women only on the F scale of the BSRI. Moreover, our results might also concur with a recent American study using the PAQ in 70 men and 84 women (Lefkowitz & Zeldow, 2006); no differences were found on the M scale between men and women, but women scored significantly higher than men on the F scale. Recent research gives further support to our findings, which indicate that as compared to the original instrument (Bem, 1974), today 18 of 20 feminine traits are still qualified as feminine, whereas only 8 of 20 masculine traits are still qualified as masculine (Auster & Ohm, 2000).

Our work could extend earlier investigations showing that gender role patterns in men and women are sensitive to cultural differences. Moreover, our investigation suggests together with Herman-Jeglinska et al. (2002) that no matter the culture where we applied the BSRI, MF transsexuals would score as women and FM transsexuals would score as men. Therefore, gender role patterns in MF transsexuals are a mirror image of those in women, and gender role patterns in FM transsexuals are a mirror image of those in men.

According to Bem, subjects can be categorized as masculine sex-typed (high on masculinity and low on femininity), feminine sex-typed (high on femininity and low on masculinity), androgynous (high on both scales), or undifferentiated (low on both scales). The hypothesis predicts that better adjusted persons are those with equivalent amounts of masculine and feminine traits (i.e., balanced androgyny hypothesis; Bem 1974), or those high in both traits (i.e., additive androgyny hypothesis; Lefkowitz & Zeldow, 2006; Lubinski, Tellegen, & Butcher, 1981). In our study, the percentage of participants in the four categories agrees with those percentages previously found in controls (Herman-Jeglinska et al., 2002) and in transsexuals (Fleming et al., 1980; Herman-Jeglinska et al., 2002; Skrapec & MacKenzie, 1981).

Some limitations of our study should be mentioned. First, our sample might not be entirely representative of the transsexual population because it is restricted to those seeking sex-reassignment treatments. Nevertheless, patients seeking sex reassignment would be the most characterized by feeling strong and persistent inappropriateness in their gender role or their anatomical sex. Second, we did not use a concomitant measure

of social adjustment or mental health that could have contributed to testing the controversial androgynous hypothesis. Previous studies in our transsexual population using the MMPI-2 have demonstrated that most of our patients are free of psychopathology (Gómez-Gil et al., 2008). Moreover, we consider that specific measures of social adjustment will be more useful and specific than the categorization of the androgynous individuals according to the BSRI to assess general social adjustment.

Despite these limitations, we believe that a multidisciplinary gender team needs to be aware of measurement issues for assessing masculinity and femininity in gender dysphoric patients. The F scale of the BSRI, but only such a scale, appears to be a useful instrument in the Spanish population because it differs not only in transsexuals, but also between control men and women. Future cross-cultural studies using the BSRI are needed to establish more clearly whether gender role characteristics change in different cultures.

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