

Cross-Cultural Validation of the Bem Sex-Role Inventory on Bahraini and American Samples of College Students

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Abstract

The purpose of the study was to investigate the factorial invariance of the Bem Sex Role Inventory (BSRI) across samples of university students from Bahrain and the United States. To achieve this goal, the Arabic version of the BSRI was administered to 376 Bahraini and 380 American university students in class time. Previous cross-cultural research found evidence of a two- factor structure of the BSRI in American samples. Using confirmatory factor analysis, however, we found strong evidence for the three-factor structure of the BSRI in Arab and American samples. Subsequent multi-group structural equation modeling indicated the factorial invariance of this structure across the two cultural groups. Based on these findings, future cross-cultural validation studies to investigate the configural invariance of the BSRI across different categories of respondents and to construct equivalent sex role inventories in Bahrain and USA as measures of personality are warranted.

Keywords: Bem Sex Role Inventory; BSRI, Factorial invariance, Confirmatory factor analysis, Cross-cultural validation, University students, Bahrain, United States.

الصدق العاملي لقائمة بييم لدور الجنس المطبقة على عيّنات من الطلبة الجامعيين في مملكة البحرين والولايات المتحدة الأمريكية: دراسة عبر ثقافية

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الملخص

هدفت الدراسة الحالية إلى فحص اللاتباين (الثبات) العاملي لقائمة بييم لدور الجنس، والمطبقة على عيّنات من الطلبة الجامعيين في مملكة البحرين والولايات المتحدة الأمريكية. ولتحقيق هذا الهدف، تم تطبيق النسخة المعرّبة للقائمة على (٣٧٦) طالبا جامعيًا بحرينيًا، بالإضافة إلى (٣٨٠) طالبًا أمريكيًا. لقد تبين من الدراسات السابقة عبر الثقافات المختلفة أن قائمة بييم تتكوّن من عاملين، غير أن توظيف التحليل العاملي التوكيدي في هذه الدراسة أسفر عن وجود ثلاثة عوامل للقائمة في العيّنات البحرينية والأمريكية، فيما أبرزت النمذجة البنائية اللاحقة للمفهوم، على قاعدة المجموعات المتعددة، ثباتًا عامليًا لهذه البنية في المجموعتين المنتميتين لثقافتين مختلفتين. وعلى هذا الأساس، يقترح الباحث إجراء دراسات تالية للتحقق من صدق الأداة عبر الثقافات المختلفة، وفحص اللاتباين الشكلي لها عبر فئات مختلفة من المستجيبين، وبناء قوائم مماثلة تقيس السمات الشخصية ذاتها في مملكة البحرين والولايات المتحدة الأمريكية.

الكلمات المفتاحية: قائمة بييم لدور الجنس، اللاتباين العاملي، التحليل العاملي التوكيدي، صدق الأداة عبر الثقافات المختلفة، الطلبة الجامعيون، مملكة البحرين، الولايات المتحدة الأمريكية.



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INTRODUCTION

The Bem Sex Role Inventory (BSRI; Bem, 1974) has been the focus of numerous studies during the past forty years. There has been widespread interest in the concept of gender role orientation and the potential role of masculinity and femininity in the social and psychological lives of men and women. Moreover, the BSRI was an attempt to measure the concepts of masculinity and femininity as unidimensional and orthogonal constructs. Based on this assumption, the construction of the BSRI included a separate Masculine scale and a separate Feminine scale, which Bem (1974) defined on the basis of college students ratings of the desirability of sixty traits in American society.

Bem (1981a) contended that the BSRI is “based on theory about both the cognitive processing and the motivational dynamics of sex-typed and androgynous individuals” (p. 10). These concepts provided the basis for the development of Bem’s gender schema theory, the main tenet of which is that “sex-typing is derived, in part, from a readiness on the part of the individual to encode and to organize information – including information about the self – in terms of the cultural definitions of maleness and femaleness that constitute the society’s gender schema” (Bem, 1981b, p. 369).

According to Bem (1987), a sex-typed individual is someone whose self-concept

incorporates prevailing cultural definitions of masculinity and femininity. She argued that an individual could possess a number of traits from each scale and that one could demonstrate varying degrees of such traits in response to different situations, and this process takes place regardless of one’s gender. For both men and women, gender identity is less rigid among older individuals (Carver, et al., 2013).

Over the years, the psychometric properties of the BSRI were an object of interest for numerous studies that examined the underlying structure of the inventory. Within this context, Marsh and Myers (1986) proposed a multifaceted and hierarchical model of higher-order, global M and global F factors that are negatively correlated. This model was found to be invariant across gender groups. It also provided a good fit to the short form in Martin and Ramanaiah’s (1988) study where the items were subjected to confirmatory factor analysis, but the four-factor solution was the best fit for the full set of items.

On the other hand, Campbell, Gillaspay, and Thompson (1997) performed CFA on the long and short versions of the measure using the responses of 791 graduate and undergraduate students, and found that fit statistics demonstrated superiority the two-correlated-factor model for the scores obtained from the short form. Choi and Fuqua (2003), however, reviewed 23 analytic studies and



observed that most studies retained an amount of factors a range from two to four. They also found that a single clean factor was frequently reported, namely, the Femininity factor which consisted of the full subset of 10 items of the short form and was named as the Feminine, Emotional Expressiveness or Nurturance factor. With respect to the masculinity dimension of the BSRI, those studies mostly reported an instrumental factor (power and social dominance) and an autonomy factor (self-sufficiency).

Consistent with the results of Choi and Fuqua's (2003) study, a hierarchical factor structure model with seven first-order factors and two-second-order factors demonstrated a very good fit to the data in the Choi, Fuqua, and Newman's (2007) study, where the maximum likelihood CFA was used with 665 graduate and undergraduate students. Moreover, Choi, Fuqua, and Newman (2008) reported a more complex structure underlying the BSRI-M items than the BSRI-F items. While the factor analysis of responses on the M items revealed two factors that seemed to reflect what they described as social and personal dimensions of masculinity, the self-ratings on the positive items of the F scale reflected a single factor. This finding was corroborated in their subsequent study (Choi, Fuqua, & Newman, 2009) on similar samples, where the same three-factor model, including Femininity, Personal Masculinity and Social Masculinity factors, was found to be "invariant across divergent samples and gender groups" (p. 704).

A number of cross-cultural studies on the BSRI (e.g., Özkan & Lajunen, 2005; Sugihara & Katsurada, 1999), however, lend support to the two-factor model of the full version of the BSRI, which brings up several important issues. First, analysis of the previous studies (Brems & Johnson, 1990; Choi et al., 2008; 2009) reveals that the two-factor model does not provide a reasonable fit to the BSRI data from university students. In addition, a recent study (Donghyuck & Kashubeck-West, 2015) that used the CFA to investigate the factor structure of the BSRI in samples of ethnically diverse young adults in the United States found that the fit of the two-factor model to the data

was adequate only for men and women from the European American group. These facts suggest that the factor structure of the BSRI yet remains controversial.

Second, studies on cross-cultural validity of the BSRI across samples of college students from Ireland (Ryan, 1987), Japan (Sugihara & Katsurada, 1999), United States and Mexico (Sugihara & Warner, 1999), and Turkey (Özkan & Lajunen, 2005) lack extensive construct validation evidence because the statistical procedures used to assess the psychometric properties of the measure are confined to exploratory factor analysis and reliability analysis using Cronbach's alpha. Except for the Agbayani and Min's (2006) study, which sought to establish the validity of the Bem Inventory with Filipino Americans, there have been no studies examining the confirmatory factor analysis (CFA) of the responses of the BSRI with samples from different cultures although it is important to employ CFA methods in validity studies not only because they test models that are potentially "falsifiable" but also because, if properly used, these methods reward the development of more parsimonious models (Mulaik, 1988). Hence, we attempt to determine through confirmatory factor analysis (CFA) whether the three-factor model of the BSRI that had been previously found in previous studies with university students (Choi et al., 2008; 2009) can also be applied to the Bahraini and American samples of university students separately.

Furthermore, when an instrument is adapted for use in another culture, there is a need to investigate the equivalence of the instrument across cultures to ensure that it measures the same construct and gives equivalent scores in each culture. Otherwise, the results can be attributed to differences in the meaning of the construct or in psychometric properties of the measure rather than to true differences across cultures (van de Vijver & Leung, 1997). Hence, the confirmatory factor analysis serves also as a durable technique for testing the factorial invariance across different cultural and ethnic groups in the context of construct validation (Dimitrov, 2010).



However, to our knowledge, none of the studies from non-English speaking countries that attempted to demonstrate the structure and correlates of the BSRI has used confirmatory factor analysis. As CFA allows deciding which factor structure best fits the data, comparison of factor structures from different, e.g., Arab and American, cultures is essential for cross-cultural evaluation of the factor structure of the BSRI.

Based on this notion, this study attempts to answer the following questions:

- 1-What factorial model best fits the long version of the BSRI data in a Bahraini sample and a U.S. sample of university students?
- 2- Does the three-factor model of the BSRI items demonstrate factorial invariance across Bahraini and the U.S. samples of university students?

METHOD

Participants

A sample of 376 Bahraini undergraduate students enrolled in the College of Education at the University of Bahrain and 380 undergraduate education students studying at a U.S. Midwestern State University volunteered to participate in this study. Women comprised (68%) and (53%) of the Bahraini and American students, respectively.

The participants were recruited through universities in Bahrain and the United States. The U.S. students were enrolled in an introductory psychology course. The Bahraini students were enrolled in various courses offered by the College of Education at Bahrain University. Participants received credits for their participation.

The mean age was 23.1 years for the Bahraini sample ($SD = 1.05$), and 22.8 years ($SD = .87$), for the American sample. From the ethnic point of view, the American sample consisted of Caucasian (61%), African American (27%), Asian (5%), Hispanic (4%), and other (3%). The ethnic composition of the Bahraini sample, in turn, was homogenous because all were Arabs with the same cultural background.

The motives behind using university students as population of study were the considerations of ease of recruitment and administration, and the optimization of the equivalence of research samples across the cultures. The selection of university students as respondents to replicate the previous studies (Choi et al., 2008; 2009) was made despite the fact that the composition and characteristics of university students in Bahrain is not precisely equivalent to those in USA, where the original studies were undertaken. It is further justified by the students' sophistication in completing rating scales, being an intellectual and more accessible group of society (Visser & van Staden, 1990). Although not necessarily representative of the entire population, the student samples in this study are representative of university students as a whole and thus would be similar to samples from other universities in both USA and Bahrain.

We chose a sample from the United States to validate previous results from American samples (e.g., Reed-Sanders, Dodder, & Webster, 1984; Sugihara & Warner, 1999) using data from a society with predominantly Western cultural values. Also, we chose a sample from Bahrain because cross-cultural researchers in Arab countries (e.g., Al-Heeti, Hamid, & AlGhorani, 2012) have observed that Arab samples tend to be strongly differentiated from Western samples, namely in specific masculine traits linked to Bem's inventory (e.g., assertive, secretive, dominant, self-reliant, etc.); and feminine traits (e.g., yielding, shy, affectionate, etc.). We therefore believe that these two samples constitute a solid basis for a strong test of invariance.

Materials

Bem Sex Role Inventory (BSRI). 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. The participant is asked to indicate on a 7-point Likert-scale format how true of him and her each of these characteristics is. The M scale contains 20 traits that were chosen according to their desirability for a man than for a woman. The F scale includes 20 traits



traditionally considered as more desirable for a woman than for a man. Sample items for the M scale include forceful, dominant, and assertive; Sample items for the F scale are warm and gentle (Bem, 1981a). The remaining 20 items are used as filler items as well as a “measure of social desirability response set in a domain that is neutral with respect to sex stereotypes” (p. 23).

Procedure

The original, English version of the BSRI was translated into Arabic by Saladin Abu Nahiah (1989), the Egyptian psychologist. Special attention was paid to the nuances of meaning of each item that should be retained in the Arabic translation. Since proper translation is the key to any cross-cultural research, the forward and back translation procedures recommended in cross-cultural research (Sperber, Devellis, & Boehlecke, 1994) were employed to ensure that the Arabic version is a comparable version of the BSRI in English. The Arabic version was then administered to large samples of undergraduate students across Arab countries (Abu Ghallous & Al-Hamadani, 2011; Aladdin, 2009). The values of internal consistency reliability coefficients of the scores from the subscale scores ranged from .87 to .92, and .85 to .93, for Masculinity and Femininity dimensions, respectively. Correlation coefficients between Masculinity and Femininity ranged from .09 to .11 and were not statistically significant ($p > .05$). Therefore, the estimates of construct validity and internal consistency reliability coefficients of the Arabic version of the BSRI demonstrated its general adequacy for research purposes.

The Bem Sex Role Inventory (BSRI) was administered to the samples of university students

in Bahrain and USA in a normal classroom setting, which consisted of groups of 30 to 40 students.

Given the factor structure of BSRI has been well studied, CFA models were used to test the factorial structures of the long form of BSRI for the Bahraini and American data. Accordingly, we conducted a multi-group CFA using Mplus 4.21 (Muthe'n & Muthe'n, 2004) on covariance matrices to evaluate the factor structure of the BSRI. Using the procedure recommended by Dimitrov (2010), we tested the configural invariance by measuring the fit of a baseline, three-factor model consisting of Personal Masculinity, Femininity, and Social Masculinity to each sample.

Following the configural invariance, we established the metric invariance using the robust weighted least square method, which is based on a polychoric correlation matrix for the ordinal data (Jöreskog, 2005). We tested the scalar invariance by allowing the intercepts to be equal across the two samples (Satorra & Bentler, 2001).

To assess the overall fit of the models, we used the following fit indices: the standardized root mean squared residual (SRMR) $\leq .10$, the comparative fit index (CFI) $\geq .95$, the Tucker–Lewis index (TLI) $\geq .90$ and the root mean square error of approximation (RMSEA) $\leq .06$ (Hu & Bentler, 1999). To compare the nested models, the difference in fit was also evaluated by CFI and TLI (Cheung & Rensvold, 2002).

RESULTS

Means (M), standard deviations (SD), and internal consistency reliability coefficients of the scores from the subscale scores for both samples are presented in Table 1. The internal consistency

Table 1: Descriptive Statistics and Internal Consistency Reliability Coefficients of the Sample

Sample	Variable	n	M(SD)	α	95% CI
Bahrain	Personal Masculinity	376	4.65(.81)	.903	[.853, .953]
	Femininity	376	4.49(.77)	.884	[.834, .934]
	Social Masculinity	376	4.68(.56)	.822	[.772, .872]
United States	Personal Masculinity	380	5.12(.96)	.914	[.864, .964]
	Femininity	380	5.72(.74)	.812	[.762, .862]
	Social Masculinity	380	4.85(.86)	.860	[.810, .910]

Note. α = internal consistency reliability coefficient; CI = confidence interval.



reliability coefficients of the scores of the BSRI ranged from .82 to .90 for the Bahraini sample, and from .81 to .91 for the American sample. Since typically acceptable values for reliability coefficients are set in .80 (Henson, 2001), high values reported for both groups show a high level of internal consistency reliability. These values are comparable to other internal consistency reliability coefficients obtained in previous studies for masculinity and femininity factors (.84 to .87; Bem, 1981a) and therefore they are generally adequate for research purposes. For the Bahraini sample, the skewness for the three subscale scores ranged from .25 to 2.38 with a median of 1.13, and the kurtosis ranged from -1.26 to 2.29 (Z ranged from -1.25 to .95, $p > .05$). For the American sample, the skewness ranged from

.51 to 2.81 with a median of 1.24, and kurtosis ranged from .31 to 2.05 (Z ranged from -.85 to 1.40, $p > .05$). The obtained figures indicate that the assumption of multivariate normality is valid for both samples (DeCarlo, 1997). The correlation coefficients between the three factors ranged from -.03 to .11, and were not statistically significant, $p > .05$, indicating their mutual independence from each other.

Multi-Group confirmatory factor analysis

Separate CFA analyses. To check whether the three-factor structure of the BSRI is tenable in each of the two groups, the mean and covariance structures were tested across some demographic variables (e.g., gender and age) to ensure that these statistics are homogeneous within each country. Results are displayed in Table 2.

Table 2: Means, Covariance Structures, and Fit Indices for the Study Variables

Sample	Variable	n	X ²	df	SRMR	CFI	TLI	RMSEA
Bahrain	Gender	376	114.25*	84	.06	.96	.91	.05
	Age	376	120.68*	84	.07	.98	.94	.04
United States	Gender	380	107.31*	84	.05	.96	.92	.04
	Age	380	128.46*	84	.06	.97	.95	.05

Note. df = degrees of freedom; SRMR = standardized root mean squared residual; CFI = comparative index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation. * $p < .01$

It is seen from Table 2 that the mean and the covariance structures across genders or ages did not differ substantially for both the Bahraini and the U.S. samples. As a result, these subgroups for each country were pooled in all subsequent analyses.

CFA was run with Mplus 4.2. Prior to running CFAs, the three-factor model was hypothesized in a way that BSRI items were specified to load on specific latent variables (factors). Factors were allowed to correlate with one another, but measurement errors were not allowed to correlate. Several fit indices were used in

evaluating the adequacy of models, including a statistic, the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standard root mean square residual (SRMR). The model is considered as reasonably good fit if the following fit criteria are satisfied: $CFI \geq .95$, $RMSEA \leq .06$, and $SRMR \leq .08$ (Hu & Bentler, 1999). The CFA results from the Bahraini and American groups supported the hypothesized three-factor model (see Table 3) with a good fit to the data. Therefore, the three-factor model was used as the baseline model in testing for measurement invariance across the two samples.



Table 3: Fit Indices for Different Models in Two Samples

Model	Sample	X ²	df	SRMR	CFI	TLI	RMSEA
Two-Factor	Bahrain	252.44*	54	.13	.81	.71	.12
	United States	538.11*	54	.17	.92	.82	.16
Three-Factor	Bahrain	181.65*	51	.06	.97	.92	.04
	United States	167.24*	51	.05	.98	.91	.05

Note. df = degrees of freedom; SRMR = standardized root mean squared residual; CFI = comparative index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation. *p < .01.

It is important to note here, that while the femininity factor was fit to all 20 F item indicators, the M item indicators were specified

to the two masculinity factors, i.e., Personal Masculinity and Social Masculinity, as it is shown in Table 4.

Table 4: Assignment of the M Items of the BSRI to the Two Masculinity Factors

Personal Masculinity Items		Social Masculinity Items	
Forceful	Self-reliant	Assertive	Ambitious
Dominant	Aggressive	Willing to take a stand	Competitive
Athletic	Masculine	Makes decisions easily	Independent
Strong personality	Self-sufficient	Have leadership abilities	Analytical
Willing to take risks	Individualistic	Defend my own beliefs	Acts as a leader

In order to compare the fit of other alternative, two-factor model with the hypothesized three-factor model, additional CFA was run. For the two-factor model, masculinity and femininity factors were fit to the 40 masculine indicators and 20 feminine item indicators. The last factor coefficient of the set of indicators for each factor was fixed to 1.0 for statistical identification (Byrne, 1994). The two factors were allowed to correlate, but the errors were left uncorrelated. As seen in Table 3, the two-factor model reported a misfit to the data for the Bahraini

and the American populations, which indicates that the three-factor solution best accounted for the structure and organization of constructs measured by the original version of the BSRI.

Factorial invariance across two cultures

To address the second question, the baseline model was tested for measurement invariance across the two samples. The results are summarized in Table 5, where the three-factor model is the

Table 5: Testing for Measurement Invariance Across the Bahraini and U.S. Samples

Model	X ²	df	CFI	RMSEA	dif	df dif	CFI dif
Model 0	236.58*	84	.98	.04	---	---	---
Model 1 and Model 0	308.73*	110	.98	.06	72.15*	18	.00
Model 2 and Model 1	404.84*	124	.95	.05	96.11*	22	-.03

Note. df = degrees of freedom; SRMR = standardized root mean squared residual; CFI = comparative index; RMSEA = root mean square error of approximation. *p < .01.



baseline model (Model 0) for both groups together with no invariance assumed. This model provided a good fit. The next step was to test Model 1 by constraining all factor loadings to be equal across the two samples. Again, adequate model fit was found. Although chi-square difference was significant, CFI did not decrease. Hence, we decided to test the invariance of item intercepts across the two groups. Model 2 was obtained by constraining all item intercepts in Model 1, in addition to factor loadings to be equal across groups. The results indicated that item intercepts are invariant across the two groups. Indeed, the data fit for Model 2 was acceptable. Also, the chi-square difference between Model 1 and Model 2 was statistically significant, and the CFI decreased by an amount larger than .01, thus indicating the factorial invariance of the three-factor model of the BSRI across the two samples.

DISCUSSION

The principle aim of this study was to determine whether the three-factor model of the BSRI (Personal Masculinity, Femininity, and Social Masculinity) that had been found in previous studies (Choi et al., 2008; 2009) with university students can also be applied to the Bahraini and American samples of university students separately.

As in previous studies with university students, the results of the CFA showed that, the three-factor solution (Personal Masculinity, Femininity, and Social Masculinity) can be considered as an appropriate model for the BSRI in Bahraini and American university students. Furthermore, the results showed that the internal consistency reliability coefficients of the scores of the BSRI ranged from .81 to .91, demonstrating good internal consistency reliability of the measure, which in turn confirms its good psychometric properties. Hence, combined with the results of other previous studies, our results demonstrate the cross-cultural robustness of the three-factor structure of the BSRI (one clean F factor and two M factors, consistent with the general trend in literature), and thus replicate the psychometric strengths of this inventory when

used in undergraduate students. Consequently, the BSRI constitutes a reliable cross-cultural tool to be used to equally and equivalently assess those desirable traits of instrumentality and expressiveness that are related to men and women in the societies of Bahrain and the United States.

Although some researchers (Fan & Sivo, 2009) strongly argue for the “use of goodness-of-fit indexes descriptively for model fit assessment, but not inferentially for statistically testing model fit” (p. 69), one should keep in mind that fit indices do not reflect the predictive accuracy of the model, and thus the assessment of any factor analytic model fit is still based on global measures of fit. As such, “these measures do not suggest that all parts of the model fit equally well—only that the overall or average fit of the model has reached an acceptable level, therefore, other aspects of the model should also be examined to provide a more comprehensive picture of its quality” (Nye & Drasgow, 2011, p. 566). According to Kline (2005), when fit indices suggest that multi-factorial models provide a similar fit for the same data, the more parsimonious model is preferred owing to its greater explanatory power. As the three-factor model best reflects the influence of social aspect on the sample’s responses to BSRI items, and confirms the agreement to the social nature of masculine and feminine traits in both countries, its preference to other models of BSRI is obvious.

The fact that the original factors of Personal Masculinity, Femininity, and Social Masculinity in Choi et al. (2008; 2009) studies were retained in this study for both cultural groups should be viewed in the light of several factors. First, results reported in this study confirm that there is an agreement as to the social nature of masculine and feminine characteristics in Bahrain and USA, and data are consistent with other cross-cultural findings that stereotypically male traits involve a cluster of instrumental qualities while female traits should pertain to a warmth-expressiveness constellation, which basically lends support to the construct validity of the measure in different cultural contexts (Özkan & Lajunen, 2005; Sugihara & Katsurada, 1999).



Second, the essence of masculinity in both the Bahraini and American society is uniform despite the differences in the socio-economic conditions in the two countries. While “a marginalized and dissident masculinity of the 1950s, as Savran (1998) puts it, has become increasingly central and hegemonic in U.S culture upon the theme of the white male as victim, searching for the wild man within the spiritual male” (p. 5), patriarchal relations in Arab society supported the production of systematic male domination in a culture that valorized kin structures, morality, and idioms in kin and non-kin relations, placing the woman in a subordinate position, where she depends on the man in almost all aspects of life (Aladdin, 2009).

In reflection of the will and power of masculine presence and certainty, personal masculinity, in the American culture for example, is often depicted in social media in the form of an timeadventurous, bigoted hero who embraces violence as the way to battle gangsters and restore justice for the oppressed. In Arabian culture, this concept is embodied in the form of the dominant, authoritative man, who utilizes his powers to reinforce a set of hegemonic ideals of manhood in the society, protect his family, and care for his kins and people. Ironically, this very kind of personal masculinity is now responsible for the production of despotic leaders in the Arab world (Zaatari, 2015).

Similarly, the nature of social masculinity is identical. This concept is clearly manifested in the American or Bahraini man’s ability to use his manhood attributes to better the lives of his citizens, advocating at the same time the values of peace, freedom, brotherhood, democracy and equality in all spheres. This kind of man is assertive, ambitious, arming him oneself with optimism, good heartedness and grace. Such a man is capable of integrating competitiveness with ambition, assertiveness with the willingness to take a stand, and leadership abilities with defending his own beliefs. Such men are strong but worshipping women, men apologizing, in their power, for the oppression of women, thus reflecting a new version of masculinity (Phoenix, 2014).

Third, since the same factor structure was found in countries with different cultures, the developmental trends in the mean levels of personality traits in the adulthood stage appear to be universal, hence similar gender differences were found among those cultures. This means that personality traits seem to transcend culture, and therefore, the study of personality and culture is no longer a matter of documenting how culture shapes personality; instead, it asks how personality traits and culture interact to shape the behavior of individuals and social groups (McCrae, 2001).

Since the findings of this study corroborate the previous research that have found a three-factor solution for the BSRI with college students, we may therefore conclude, on the one hand, that the factorial structure of the BSRI remains invariant across Bahraini and U.S. students, despite assumed cultural differences. On the other hand, the results of the current study seem to be inconsistent with the factor-analytic studies by Blanchard-Fields, Suhrer-Roussel, & Hertzog (1994) and Campbell et al. (1997). Specifically, Campbell et al. reported a good fit of the two-correlated-factor model to the responses of undergraduate students to the long form of the BSRI. Future cross-cultural validation studies are pressingly needed to compare the two-factor and the three-factor model for divergent samples from Bahrain and to further investigate the configural invariance of the BSRI across different respondents. Such studies are also warranted in order to address the concern as to whether the concepts of personal masculinity, femininity, and social masculinity can be utilized to construct equivalent sex role inventories in Bahrain and USA as measures of personality.

It is important, however, to note some limitations of this study, associated with the age and education level of respondents, and with the biases in student responses to the Bem Sex Role Inventory as a measure of personality, motivated by social desirability, which limits the generalizability of results.

Finally, the results from this study clearly reveal the need to evaluate the factorial invariance of the measures of personality



to ensure that the instrument measures the same construct, and yields comparable results across different cultures of interest. This seems vitally important given that the psychological measures of personality serve as powerful tools to reveal the different conceptions of personal and social traits and to help college students of different cultures interpret them in line with the new cultural standards that are widely dominant in the contemporary era of globalization.

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