Translation and Cross-cultural Adaptation of Traditional Masculinity and Femininity Scale (TMF-s) for use with Brazilian University Students

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Abstract

Men and women seem to have different susceptibilities to disease and dissimilar responses to pain. These differences are not well understood. Understanding those variations between men and women from the perspective of gender identity can contribute to disparities observed in the health field. Since 1980, efforts have been made to develop instruments that can help to categorize individuals according to their own gender perception. One of these, recently developed, is the Traditional Masculinity and Femininity Scale (TMFs). The advantage of this scale is to allow the gender self-identification without the need for attributes. The aim of this study is to present the process of cross-cultural adaptation of the TMFs for applicability in studies in the Brazilian population. The cross-cultural adaptation followed the steps: 1) authorization by the authors; 2) initial translation into Portuguese; 3) cultural, conceptual, experimental and idiomatic adaptation to the target population; 4) retroversion; 5) assessment by a revision committee; and 6) pretest. The equivalence of measurement, corresponding to the psychometric properties to a gold standard, is in progress. In conclusion, the original version of the TMF scale, having been translated, culturally adapted, and validated into Brazilian Portuguese has proven to be a reliable instrument that is easy to use, and can be used in both clinical practice and clinical trials in the evaluation of gender identity.

Keywords: Gender Identity. Transcultural Adaptation. Surveys and Questionnaires.

1 Introduction

The last decade has seen an explosion in research on social contributions to health and well-being. Social epidemiology brought renewed attention to social context, and the value of revealing an individual within his/her context, for deeper understandings of health risks and exposures. Because of these developments, contemporary health researchers look both deeper within the body itself, and further upstream to environments, thus “sitting” the body. Two concepts or variables often mentioned in health research are “sex” and “gender”. Sex refers to the biological distinctions between males and females, most often in connection with reproductive functions. Gender, by contrast, emphasizes the socially constructed differences between men and women that give rise to masculinity and femininity. The term gender can be applied to individual difference, as well as to cultural, institutional, and structural differences, which is conceptualized as gender roles.

Each individual may have a number of identities, such as an ethnic identity, a religious identity, or a national identity. A very fundamental identity is one’s gender identity. Gender identity refers to the extent to which a person experiences oneself to be like others of one gender. One’s sense of being male or female largely determines how people view themselves and provides an important basis for their interactions with others.
Gender role refers to the culturally and socially constructed meanings that describe how women and men should behave in certain situations according to feminine and masculine roles learned throughout life. Gender identity and gender roles are often described as a single concept.5

Men and women seem to have different susceptibilities to disease. These differences are not well understood. For example, individual differences in gender roles have also helped to explain sex differences in clinical pain. Masculinity is associated with less physical disability and pain, less psychological distress and anxiety, and greater life satisfaction among male and female patients with rheumatoid arthritis. In addition, a prospective study revealed that higher femininity at college entry was predictive of chronic pain conditions 30 years later among men, but not women.6,8

Gender research has developed many instruments to measure different aspects of self-ascriptions of gender stereotypical features, including attributes, behaviors, interests, and attitudes.7 Supplemented with these scales, the Traditional Masculinity and Femininity Scale (TMFs) was designed as an instrument for globally assessing people’s overall, or “core,” masculinity-femininity. The TMFs measured realizable an underlying, one-dimensional construct, and it was found to be a valid instrument for assessing masculinity-femininity. Furthermore, it correlated moderately with other gender-related instruments, such as the Bem Sex Role Inventory (BSRI) and the German Extended Personal Attributes Questionnaire (GEPAQ).8

However, the gold standard BSRI instrument was developed in the late 1980s (German version). Considering social, cultural and behavioral changes over the last decades, it might have lost some validity regarding the description of femininity and masculinity.7,9

The TMFs instrument has been recently developed and validated to the assessment of gender identity and gender roles. Due to the predictable differences possibly found among countries, and the importance of this topic in pain research, the objective of the present study was to translate and perform a cross-cultural adaptation of the TMF scale so that it can be used as a screening tool for gender research in Brazil.

2 Material and Methods

2.1 The scale

The TMF scale is an instrument for measuring gender-role self-concept, namely, gender-role adoption, gender-role preference, and gender-role identity. TMF consists of six items only: One for gender-role adoption (“I consider myself as…”), one for gender-role preference (“Ideally, I would like to be…”), and four for gender-role identity (“Traditionally, my 1. interests, 2. attitudes and beliefs, 3. behavior, and 4. outer appearance would be considered as…”) in order to measure an individual’s gender-role self-concept in parsimoniously.

All of them have high face validity. Each item is to be independently rated in terms of femininity and masculinity. A 7-point-scale is used to gauge the extent to which the participant feels feminine or masculine, how feminine or masculine she or he ideally would like to be, and how feminine and masculine her or his appearance, interests, attitudes, and behavior would traditionally be seen.7

2.2 Forward and back-translation process

The cross-cultural adaptation followed the steps proposed by World Health Organization10 and Guillemin et al.11: 1) authorization by the authors; 2) initial translation into Portuguese; 3) cultural, conceptual, experimental and idiomatic adaptation to the target population; 4) retroversion; 5) assessment by a revision committee; and 6) pretest. The schematic of all stages of cross-cultural adaptation can be seen in Figure 1.

Figure 1 - Schematic stages of cross-cultural adaptation

Source: The authors.

The lead author of the TMFs was initially contacted and authorized the translation to Brazilian Portuguese. The Research Ethics Committee of the University of Pernambuco (protocol 83717617.7.0000.5207) approved the study.

Initially, two native Brazilian speakers who had Brazilian Portuguese as their mother language and were fluent in English independently translated the items in the original version of the TMFs into Brazilian Portuguese. Only one of the translators was aware of the results analyzed by the questionnaire. The other translator had no knowledge of the concepts, being characterized as a “naive” translator. Therefore, two independent versions (T1 and T2) were produced.

Then, a committee of two psychologists and two dentists, all bilingual, compared these two initial translations, creating a new, first version of the scale in Brazilian Portuguese. All members of this committee were bilingual university professors and researchers with clinical experience in gender diversity and had advanced knowledge of the English language. The concern with semantic, idiomatic and conceptual equivalence was present in the accomplishment of cross-cultural adaptation as well as the use of simple and familiar words to the age group and target population.

Two professional bilingual translators who were fluent in Portuguese and English back translated the first Brazilian Portuguese version into English. They did not participate in the previous stage and did not know the TMFs. Following,
the two back translated versions were compared with the
original TMFs to validate the consistence in the translated
version which reflected the same original meaning. The two
back translations were very similar with just two different text
fragments.

Face validity was performed in a target population which
comprised six university students. There were no doubts
concerning questions interpretation, requiring no changes on
the forward translated scale. The pre-test phase intended to
test the scale regarding comprehension, clarity of questions
and answers and difficulties encountered. It was performed
at the Faculty of Dentistry of Pernambuco, Brazil, among
42 dentistry students from both genders (30 female and 12
male), aged between 20 and 23 years. They were invited to the
classroom and agreed to participate by signing the informed
consent term. After a meeting with the volunteers, when the
objectives of the study were explained, the scale was applied as
a self-administered questionnaire. At the end, each participant
was asked about the instrument in relation to the items
described previously. The mean time of the scale application
was 20 minutes and no doubt or difficulty understanding was
reported. Data analysis was performed using IBM SPSS 21.0
software (IBM Corp., Armonk, United States).

3 Results and Discussion

During the process of forward translation, some expressions had to be reworded to fit the Brazilian context. The main changes were made in the following terms: the words “ideally”, initially translated as “idealmente”, and “Traditionally” which was translated as “Tradicionalmente”. Since these words may not be properly interpreted, the authors agreed to replace for “Preferencialmente” and “De modo geral”, respectively.

From the median of the scale, it was possible to observe variation between biological sex and gender identity, the main scale construct. Comparing to the BSRI instrument, it was not necessary for the participants to discriminate attributes, since it is a concept that the subject has of herself/himself. This is the main advantage of this scale (Table 1).

Table 1 - Original version, version 1, back-translated version and final version of the TMF scale.

<table>
<thead>
<tr>
<th>Item</th>
<th>Original</th>
<th>Version 1</th>
<th>Back-translation</th>
<th>Final version</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I consider myself as …</td>
<td>Eu me considero como…</td>
<td>I consider myself as ...</td>
<td>Eu me considero como…</td>
</tr>
<tr>
<td>2</td>
<td>Ideally, I would like to be ...</td>
<td>Preferencialmente, eu gostaria de ser...</td>
<td>Preferably, I would like to be ...</td>
<td>Preferencialmente, eu gostaria de ser...</td>
</tr>
<tr>
<td>3</td>
<td>Traditionally, my interests would be considered as…</td>
<td>De modo geral, meus interesses seriam considerados como…</td>
<td>Overall, my interests would be considered as ...</td>
<td>De modo geral, meus interesses seriam considerados como...</td>
</tr>
<tr>
<td>4</td>
<td>Traditionally, my attitudes and beliefs would be considered as...</td>
<td>De modo geral, minhas atitudes e crenças seriam consideradas como...</td>
<td>Overall, my attitudes and beliefs would be considered as ...</td>
<td>De modo geral, minhas atitudes e crenças seriam consideradas como...</td>
</tr>
<tr>
<td>5</td>
<td>Traditionally, my behavior would be considered as...</td>
<td>De modo geral, meu comportamento seria considerado como...</td>
<td>Overall, my behavior would be considered as ...</td>
<td>De modo geral, meu comportamento seria considerado como...</td>
</tr>
<tr>
<td>6</td>
<td>Traditionally, my outer appearance would be considered as...</td>
<td>De modo geral, minha aparência exterior seria considerada como...</td>
<td>Overall, my outward appearance would be regarded as ...</td>
<td>De modo geral, minha aparência exterior seria considerada como...</td>
</tr>
</tbody>
</table>

Source: Research data.

Considering this scale is not a diagnostic instrument, it
was not necessary to investigate its reproducibility by means
of Cronbach. It is imperative to state that an advantage of this
scale is to allow the researcher to identify gender identity as
well as gender roles.

This study presented the stages of the translation into
Brazilian Portuguese and cross-cultural adaptation of an
instrument for the evaluation of identity/gender roles. Each step
of the instrument adaptation process was carried out carefully,
and few changes were necessary based on discussions among
the researchers, specialists and literature review, in order to
obtain conceptual, semantic and operational equivalence. The
study for the evaluation of its psychometric properties is
being developed.

3 Conclusion

In conclusion, the original version of the TMF scale,
translated, culturally adapted, and validated into Brazilian
Portuguese has proven to be a reliable instrument that is easy
to use, and can be used in both clinical practice and clinical
trials in the evaluation of gender identity. However, further
application of this instrument is recommended in different
populations.

References

1. Short SE, Yang YC, Jenkins TM. Sex, gender, genetics,
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