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Cross-Cultural Adaptation of the Brazilian Portuguese Version of the Goldsmiths Dance Sophistication Index (Gold-DSI)

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HIGHLIGHTS

- The Gold-DSI-B is a reliable self-report tool to assess individual differences in participatory and observational dance experience.
- The Gold-DSI-B allows researchers to examine dance expertise and practice across cultural contexts.
- The Gold-DSI-B is applicable to clinical, psychological and neuroscience research, rehabilitation and dance education.

ABBREVIATIONS

CFI	Comparative fit index
Gold-DSI	Goldsmiths Dance Sophistication Index
Gold-DSI-B	Brazilian Portuguese Gold-DSI
ICC	Intraclass Correlation Coefficient
MDC	Minimal Detectable Change 95% confidence interval
r	Pearson Correlation Coefficient
RMSEA	Root mean square error of approximation
SD	Standard Deviation
SEM	Standard Error of Measurement
SPSS	Statistical Package for the Social Sciences
SRMR	Standardized root mean square residual
TLI	Tucker-Lewis index
UFCSPA	Federal University of Health Sciences of Porto Alegre

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BACKGROUND: Dance is an emerging research topic in cognitive neuroscience, education, psychology, and as an intervention for neurodegenerative diseases and mental health conditions.
AIM: This study developed and validated a Brazilian Portuguese version of the Goldsmiths Dance Sophistication Index (Gold-DSI), a psychometric tool designed to assess individual differences in dance experience.
METHODS: The study was conducted in two phases. In the first phase, we translated and culturally adapted the English-language Gold-DSI. In the second phase, we validated the Brazilian Portuguese Gold-DSI for the Brazilian population, evaluating its dimensional structure, internal consistency, and test-retest reliability.
RESULTS: A total of 289 participants completed the Brazilian Portuguese Gold-DSI (Gold-DSI-B), and 75 participants completed the same tool again four weeks later. The results demonstrated good to excellent internal consistency, test-retest reliability, and construct validity.
INTERPRETATION: The Gold-DSI-B is a reliable, brief tool for assessing individual differences in both participatory and observational dance experience. It also provides valuable insight into the role of both dancing and observing dance within the Brazilian cultural context.

KEYWORDS: Dance | Expertise | Health | Dance Movement Therapy | Individual differences

INTRODUCTION

The role of dance for scientific research in cognitive neuroscience, rehabilitation, sports, exercise and health domains has grown rapidly over the last fifteen years. Dance has been used as a tool in research on learning and memory, emotion and affect, movement and brain synchrony and is linked to adaptive neuroplasticity [1,2,3,4,5,6,7]. Dancers' brains exhibit stronger alignment with music, characterized by enhanced coupling in the theta frequency band, which is associated with heightened emotional and memory processing as well as improved audiovisual integration [8]. Dancing together is also associated with group affiliation and the enjoyment of observing others dance [9,10]. The combination of cognitive, social, and exercise effects of dancing may underlie both the protective and rehabilitative effects of dance-based interventions for neurodegenerative conditions. For example, regular dance participation is associated with a lower risk for developing dementia [11]. Dance can also be used as an effective therapeutic approach for elderly people to reduce the risk of falls [12,13,14] and to improve quality of life [15,16]. For example, dance as an adjunct intervention improves physical and cognitive aspects in

people with Parkinson's disease [17,18,19]. More broadly, dance provides many applications for physical and mental health and well-being [2]. Dance is also an effective intervention to improve mental and reduces both depressive [20] and dissociative symptoms [5,21].

Dance offers a promising approach to improving both physical and mental health. However, to assess the potential of any dance-based intervention, it is crucial to consider individual differences in dance experience. Prior engagement with dance might significantly help to predict therapeutic success by explaining why some people benefit from dance-based interventions more than others or why they sign up to participate in these studies in the first place. Yet, standardized instruments to assess individual dance expertise, participation frequency, and engagement are lacking. This limitation hinders the ability to assess the impact of prior dance experience on the effectiveness of dance-based interventions. The Goldsmiths Dance Sophistication Index (Gold-DSI) [22] is the first self-administered standardized psychometric tool to assess individual differences in dance background and experience. Currently, there is no Brazilian Portuguese version of the Gold-DSI, and its use in the Brazilian population requires a cross-cultural adaptation.

In Brazil, several clinical trials have explored the therapeutic effects of dance for older adults [23,24], people with Parkinson's disease [25,26], or breast cancer survivors [27], but none of these considered prior dance experience. Moreover, dance styles, skills and cultures vary widely across different countries and populations. Previous research mapped dance practice across eight of the 27 Brazilian capitals [28]. From those individuals who dance professionally, 34.9% work in gyms or dance studios, 21.1% in private primary schools, 19.5% in public primary schools, 12.4% in associations, 6.4% in foundations, and 11.4% in other contexts [28]. Brazil is considered the seventh most populous country in the world and has a thriving dance culture and several unique dance styles. For instance, Capoeira and Samba are traditional dance styles that originated in Africa and are closely linked to Brazilian culture [28]. It is estimated that around six million people practice Capoeira in Brazil. Samba is even more popular, and it is celebrated every year on the traditional Samba National Day. Samba is also the official dance style during the annual Brazilian Carnival, which is a traditional festivity with live music and dance, gathering around 50 million people in different regions in Brazil. The pervasiveness of dance throughout Brazilian culture makes Brazil an ideal place to conduct cross-cultural studies on the cultural significance of dance.

Thus, the main objective of this study is to translate and adapt the DSI for the general Brazilian population and to verify its psychometric properties. The study consisted of two phases: (1) translation and cross-cultural adaptation and (2) establishing psychometric factors of the Brazilian Portuguese Version of the Gold-DSI.

METHODS

Study design

This is a cross-cultural adaptation study of the questionnaire Gold-DSI for the Brazilian population. The study was approved by the Human Research Ethics Committee of the Federal University of Health Sciences of Porto Alegre (UFCSPA) under protocol 5.159.502.

Gold-DSI Questionnaire

The original version (English language) of the Goldsmiths Dance Sophistication Index (Gold-DSI) [22] measures individual differences in dance sophistication as a combination of participatory and observational dance experience. Twenty items assess experience in dance participation along four subscales: body awareness (six items), social dancing (six items), urge to dance (five items), and dance training (three items). The general factor dance participation comprises all 20 items from the four subscales. The mean of range values (i.e., 1 to 7) reflects the result of each subscale or general factor, with higher scores (i.e., those near to 7) indicating higher dance sophistication. A further six items measure experience in watching dance. In its original form the GOLD-DSI is suitable for English speaking adult populations.

First Phase: Translation and cross-cultural adaptation

The process comprised the translation and adaptation of the Brazilian Portuguese version of the Gold-DSI questionnaire [22]. The construction process for translation and cross-cultural adaptation included six stages: (I) initial translation, (II) synthesis, (III) back translation, (IV) experts' committee review, (V) testing the pre-final version, and (VI) approval by developers and experts committee [29,30]. The first stage involved a direct translation by two bilingual translators (native in Brazilian Portuguese and advanced in English). Both translators were selected based on their language proficiency and experience in translation but did not have specific professional backgrounds in dance. The second stage entailed synthesizing the translations from T1 and T2, by researchers (CP and ASP), to produce a single common translation, T-12. The third stage involved a back-translation by two additional bilingual translators (native in English and advanced in Brazilian Portuguese). These translators were also chosen for their language expertise and were independent of the first translation process, ensuring objectivity. The fourth stage included an evaluation by a committee of experts, comprising the two translators involved in the first stage, a statistics expert in instrument validation, two dance professionals with at least 15 years of experience, and a Brazilian Portuguese language professor. In the fifth stage, the pre-final version was validated in the general population, testing clarity and comprehension using a five-point Likert Scale (extremely unclear, somewhat unclear, neither clear nor unclear, somewhat clear, extremely clear). Finally, the sixth stage involved a review of the reports by all members of the research team,

including the developers of the original English version of the DSI. The entire process aimed to achieve equivalence between the original version and consists not only of linguistic translation but also of cultural adaptation to maintain the validity of the content at the conceptual level [29,30]. The translation of Gold-DSI was conducted along the stages of cross-cultural adaptation recommended by Beaton et al., 2000 [30], see Figure 1.

The cultural adaptation process does not ensure the maintenance of the psychometric properties of the original instrument due to differences in lifestyle habits cross-culturally. Thus, evaluation tests of psychometric properties, such as validity and reliability were performed after questionnaire translation and adaptation [30]. Translation and cross-cultural adaptation of the Gold-DSI-B were performed together with original developers (GO and DM) [22].

Figure 1. Stages of cross-cultural adaptation. Adapted from Beaton *et al.* (2000).

Second Phase: Psychometric Factors and Data Analysis

An online survey was disseminated with a link and QR code on websites at universities, via email, text messages, social media, and community centers across Brazil, recruiting a convenience sample. For online data collection, Qualtrics Online Survey Tool (Provo, UT) was used. Only Brazilian adults over 18 years were recruited and all participants provided informed consent before completing the online survey. The survey comprised questions about demographic data, including age, gender, ethnicity, nationality, region of residence, occupation status, education level, and dance practice. Participants were asked about current formal and informal dance activities, including dance exercise, professional dance, social dancing, and their experience with specific dance styles. After completing the demographic questions, individuals completed the Brazilian Portuguese version of the Gold-DSI questionnaire. We randomized the presentation order of the items across participants, as recommended by the original authors. The psychometric factors tested in this study for the Brazilian Portuguese version of the Gold-DSI are detailed below.

Reliability

Internal Consistency: We calculated internal consistency using Cronbach's alpha (or coefficient alpha) [31] for each of the four subscales, the general factor, and the observational factor. Cronbach's alpha ranges from 0 to 1 and is considered adequate between 0.70 and 0.95. The higher the correlations among the items, the higher the coefficient alpha; however, higher values over 0.95 may reflect redundant content across items [32]. The SPSS (Statistical Package for the Social Sciences) was used to perform this analysis.

Test-retest reliability: To assess test-retest reliability, participants responded to the questionnaire twice, with a four week washout period after the first completion. We calculated test-retest reliability using a two-way mixed effects model with participants as a random effect and measures as fixed effects by using the Intraclass Correlation Coefficient (ICC) [33]. Values greater than 0.90 indicate excellent reliability, between 0.75 to 0.90 indicate good reliability, 0.5 to 0.75 indicate moderate reliability and lower than 0.5 indicates poor reliability [34]. We also performed Paired Sample T-Tests to verify the differences between first and second completion (delta) and linear correlations by using Pearson Correlation Coefficient (r). For the agreement, the Standard Error of Measurement (SEM) was calculated using the formula = Standard Deviation (SD) x $\sqrt{1\text{-ICC}}$ [35]. The Minimal Detectable Change (MDC_{95}) at 95% confidence interval was calculated using the formula = SEM x 1.96 x $\sqrt{2}$ [35]. The SEM reflects the error of the instrument itself, whereas the MDC refers to the minimal detectable change necessary to exceed error margins when evaluating the same individual twice. The software JAMOVI was used to perform these analyses.

Validity

Structural Validity: Structural validity is an element of construct validity [33,36]. For this model evaluation, we conducted a confirmatory factor analysis with a robust maximum likelihood estimator from the R package "lavaan" [37], using the RStudio Statistical Software. Confirmatory factor analysis was performed to estimate whether the Brazilian Portuguese version measures the same construct as the original version of the Gold-DSI [22]. The robustness of the model fit is based on four indices: comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) [38,39]. A good fit between the model and the observed data requires cutoff values close to 0.95 for TLI and CFI, 0.08 for SRMR, and 0.06 for RMSEA [38]. CFI and TLI values from 0.90 to 0.95 are acceptable based on 0.90 criterion [38]. Fit values for RMSEA less than 0.05 indicate a good fit, fair fit from 0.05 to 0.08 and poor fit if greater than 0.10 [38]. We recorded the proportion of participants with minimum or maximum scores possible on each subscale to determine the size of any potential floor or ceiling effects.

RESULTS

First Phase: Translation and cross-cultural adaptation

Initially, stages I, II and III comprised a robust translation process between translators and authors. In stage IV, the experts' committee made a few changes to improve Brazilian Portuguese grammar to facilitate understanding. The word "sophistication" (*sofisticação*) was translated to "experience" (*experiência*). The word "experience" in English involves the knowledge or skill gained through time, although "sophistication" relates to the refinement of a complex process of knowledge. In Brazilian Portuguese communication, the word "sophistication" is more related to someone or something elegant. Thus, we used the word "experience" in the Brazilian Portuguese version to avoid confusion. In this stage, we also modified a few terms to apply to the Brazilian context.

In stage V, 41 individuals answered a survey about comprehension and clarity of the pre-final version of the translated Gold-DSI. Items were randomly selected (16 items out of 26) to keep the survey short. Individuals were unaware of the prior translation process. For each question, individuals completed a comprehension and clarity scale (five-point Likert Scale ranging from "extremely unclear" to "extremely clear"). All items had 85% of the scores classified as extremely or somewhat clear. The ten items that received "somewhat clear" or "unclear" scores were reviewed by the authors, experts committee and translators' team. A new survey was sent to previous respondents with word modifications and open boxes for suggestions regarding the ten items. Only 25% of the previous respondents answered the new survey. Four items underwent modifications related to the word substitution of the ten items retested.

We consulted the experts' committee and translators about their agreement or disagreement with the new version. After final approval, we proceeded to stage VI by sending reports to developers and team members. Both the final Brazilian Portuguese version of the Gold-DSI and the original English version are available in the Appendix.

Second Phase: Evaluation of Psychometric Benchmarks

Participants

According to previous research [22] and recommendations from Guidelines [40], the respondent-to-item ratio should not be lower than 10:1 (i.e., one hundred respondents for a 10-item questionnaire). The GOLD-DSI questionnaire comprises 26 items, and thus the sample size required should be at least 260 individuals. In total, 336 participants were recruited between December 2022 and March 2023. One was excluded as a duplicate; three were excluded due to not meeting the inclusion criteria (age<18) and 41 were excluded due to missing data (36 individuals completed only 50% and the other five completed only 89% of the questionnaire). Thus, a total of 289 participants were included in the analysis. All 289 participants were invited to respond to the survey again four weeks after the first completion (week 0). Out of these 289 participants, 75 (26%) completed the survey the second time.

Table 1 shows the demographic characteristics of 289 participants who responded to the Brazilian Portuguese Gold-DSI. Most of the participants were female (78.9%), with a mean age of 34 years old (SD=11.85). Participants were asked about their formal and informal current dance practice, including dance exercise, professional or social dancing and their practiced dance styles. 14.9% of participants reported that they do not usually dance. Most participants (60,2%) said they usually dance informally (for fun at events, parties, or at home).

Tables 2 and 3 depict the main results regarding the psychometric factors of the Brazilian Portuguese Gold-DSI. Internal consistency was good to very good, ranging from 0.79 to 0.94 (see Table 2). We did not find floor or ceiling effects for the general score of the survey, except for factor four (dance training) where we found a floor effect of 21%. Table 2 also showed the average results of the English version of the Original Gold-DSI in the UK population [22], see Figure 2.

Test-retest reliability and agreement are shown in Table 3. The Intraclass Correlation Coefficient (ICC) ranged from 0.91 to 0.97, representing excellent test-retest reliability. We also found a strong correlation and no mean differences between weeks.

The model evaluation for structural validity included the evaluation of the general factor, the four factors of the original Gold-DSI factor structure, and the separate scale. The model fit indicated an acceptable to good model fit for the factorial structure of the Brazilian version of the Gold-DSI, as compared to the Original version of the Gold-DSI [22] in Table 4.

On average, participants completed the Brazilian Portuguese Gold-DSI in five minutes, ranging from four to ten minutes.

Table 1. Demographic Characteristics (n=289).

Age (years)		34.87 (11.85)
Gender	Female	78.9%
	Male	20.1%
	Non-binary	1.0%
Ethnicity/race/ skin color	White	81.7%
	Brown	12.8%
	Black	3.5%
	Yellow	1.4%
	Other	0.3%
	NI	0.3%
Education level	Graduate degree	45.7%
	Undergraduate degree	36.7%
	High-school	17%
	Elementary	0.3%
	NI	0.3%
Occupation status	Professional	70.6%
	Student	21.5%
	Retired	4.2%
	Other	2.0%
	Interrupted by health condition	1.7%
Region of residence in Brazil	South	74.5%
	Southeast	10.0%
	North	4.8%
	Currently not living in Brazil	4.8%
	Northeast	4.5%
	Midwest	1.4%
Current dance practice	No	14,9%
	Yes, for fun (at events, parties and/or at home)	60.2%
	Yes, as a regular exercise activity	15.9%
	Yes, as a dance professional	9.0%
	Frequent dance styles practiced by dancers:	
	Contemporary	35%
	Classical ballet	24%
	Jazz	14%
	Tap	6%
	Forró; Street, Modern; Dance theatre; Zumba; Ballroom. Samba; Malambo; Folklore; Tribal; Dance trends; Stiletto; Vogue; Twerk; Mix rhythms; Tango; Bolero; Salsa; Pole; Hip hop; House; Freestyle; all styles; did not know to name the dance style practiced.	3%

Table 2. Internal consistency for the subscales of the Brazilian Portuguese Gold-DSI (n=289).

Internal consistency for the subscales of the Brazilian Version of the Gold-DSI (n=289)					**Original Gold-DSI**	
	Values at Week 0 (mean/SD)	Cronbach's alpha	Floor effect	Ceiling effect	Values (mean/SD)	Cronbach's alpha
General score (20 items)	4.49 (1.08)	0.94	0,0%	0,3%	3.91 (1.08)	0.93
Factor 1. Body Awareness (6 items)	4.68 (1.26)	0.90	0,7%	5,2%	4.15 (1.29)	0.90
Factor 2. Social Dancing (6 items)	4.93 (1.28)	0.90	0,0%	5,5%	4.17 (1.43)	0.91
Factor 3. Urge to Dance (5 items)	5.08 (1.08)	0.79	0,0%	3,8%	4.44 (1.25)	0.83
Factor 4. Dance Training (3 items)	2.40 (1.83)	0.86	21,1%	6,6%	2.03 (1.40)	0.82
Separate scale. Observational Dance Experience (6 items)	4.44 (1.25)	0.79	0,0%	1,7%	3.74 (1.18)	0.79

Table 3. Test-retest reliability for the subscales of the Brazilian Portuguese Gold-DSI (n=75).

	Test	Retest	Correlation	Reliability		Agreement	
	Week 0 (mean/SD)	Week 4 (mean/SD)	*r* (p-value)	ICC[1]	IC95%	SEM	MDC_{95}
General score	4.71 (1.02)	4.65 (1.03)	0.958 (<0.001)	0.978	0.96-0.98	0.21	0.58
Factor 1. Body Awareness	4.86 (1.12)	4.88 (1.17)	0.904 (<0.001)	0.950	0.92-0.96	0.35	0.98
Factor 2. Social Dancing	5.16 (1.20)	5.04 (1.25)	0.886 (<0.001)	0.939	0.91-0.95	0.41	1.15
Factor 3. Urge to Dance	5.14 (1.01)	5.12 (1.09)	0.842 (<0.001)	0.914	0.87-0.94	0.42	1.16
Factor 4. Dance Training	2.86 (2.03)	2.96 (2.20)	0.950 (<0.001)	0.973	0.96-0.98	0.49	1.34
Separate scale. Observational Dance Experience	4.70 (1.19)	4.46 (1.00)	0.928 (<0.001)	0.933	0.90-0.95	0.39	1.08

Note. [1]Two-way mixed effects model where subject effects are random and measure effects are fixed.
Abbreviations. r (Pearson Correlation Coefficient), ICC (Intraclass Correlation Coefficient), SEM (Standard Error Measurement), MDC (Minimum Detectable Change) at 95% of CI
Formulas.

$$SEM = s_{baseline} \times \sqrt{(1 - ICC)}$$

$$MDC_{95} = SEM \times 1.96 \times \sqrt{2}$$

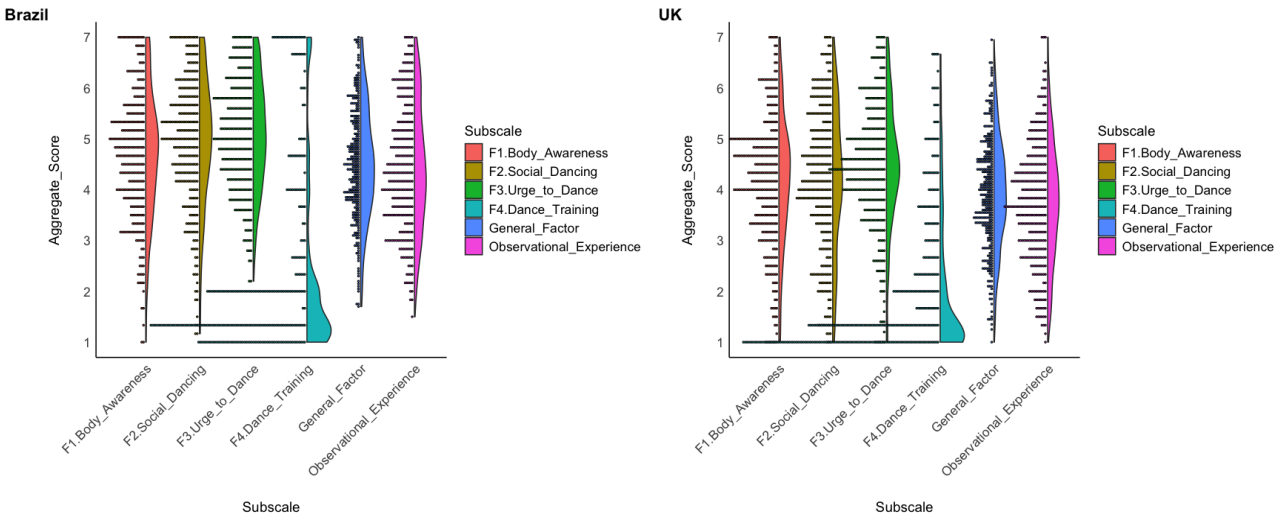

Figure 2. Comparisons between Brazilian and UK populations for Gold-DSI.

Table 4. Model evaluation between the Brazilian and Original versions of the Gold-DSI.

	CFI	TLI	RMSEA	SRMR
General score (20 items) – Brazilian Version	0.92	0.90	0.08	0.05
General score (20 items) – Original	0.95	0.94	0.05	0.05
Separate scale. Observational Dance Experience (6 items) – Brazilian Version	0.98	0.96	0.06	0.03
Separate scale. Observational Dance Experience (6 items) – Original	0.98	0.86	0.09	0.06

Abbreviations. CFI: comparative fit index; TLI: tucker-lewis index, RMSEA: root mean square error of approximation, SRMR: standardized root mean square residual.

DISCUSSION

Dance is a cultural activity present in all societies, though its significance and forms of practice can vary substantially. In this study, we developed a Brazilian Portuguese version of the Gold-DSI and validated its psychometric properties. We found high values for internal consistency, test-retest reliability, and structural validity for the Brazilian Portuguese Gold-DSI for the general adult population. Based on our sample tested, the Gold-DSI-B is easy to administer and requires approximately five minutes to complete. The Gold-DSI-B

can support research on dance engagement, studying the effectiveness of dance-based interventions, dance education, and cultural programs. More generally, its application can address gaps in documenting, monitoring and assessing the role that dance plays in Brazilian culture.

Components of the general factor capture the individual experience regarding body awareness and motivation to dance, as well as the amount of dancing in a professional and/or social context [22]. The internal consistency of each of the four factors and the general factor of the Brazilian Portuguese Gold-DSI showed appropriate values of Cronbach alpha (.79-.90), showing that questionnaire items are homogeneous yet not redundant. A separate scale investigates how much people watch dance, even without necessarily practicing dance. The internal consistency of the separate scale also showed an appropriate value of Cronbach alpha (.79). Similarly, the original version of the Gold-DSI also showed satisfactory values of Cronbach alpha (.79-.93), meaning that Gold-DSI is well formulated and has a good internal consistency across at least two specific cultural contexts.

The test-retest reliability of the Brazilian Portuguese Gold-DSI assessed the instrument's ability to distinguish variation in measures within four weeks. Test-retest for the four factors, the general factor, and the separate scale yielded an ICC of .97 to .91, indicating excellent reliability. The Gold-DSI-B showed adequate structural validity. Recommended fit indices found in our study were very close to the values encountered in the original version of the Gold-DSI [22], indicating that the questionnaire structure according to population characteristics is reasonably similar across UK and Brazilian populations.

Interestingly, our results suggest higher levels of dance sophistication in the Brazilian population than the UK [22] population overall, but with a similar pattern across the subfactors of the DSI. For example, in both Brazil and the UK, most participants usually practice dance informally and only relatively few are professionally trained in dance. While these findings suggest an overall higher level of pervasiveness and significance of dance in Brazilian culture, future large cross-cultural studies are required to study cultural differences between Western and Non-western populations. Brazilian dance culture incorporates many different local dance styles from North to South, such as *forró* and *samba*, but is also strongly influenced by classical ballet or waltz that originated in European culture. Although people in our study often practiced contemporary dance, preferences of styles and cultures are quite different across regions in Brazil. It is important to note that most participants who completed the Brazilian Portuguese Gold-DSI live in Southern Brazil. Furthermore, we recommend future studies investigate cut-off scores to classify dance experience levels (e.g., light, moderate, high) and normative data to differentiate dance professionals from recreational dancers.

The Gold-DSI can be administered to any Brazilian adult and to people with or without prior dance experience. However, its feasibility and reliability may depend on individuals' health status (i.e., cognitive severity status), particularly in people with neurodegenerative conditions such as dementia, Parkinson or motor neuron disease. Future research will be necessary to establish normed DSI scores for specific clinical populations or children. Overall, the translation and cross-cultural adaptation of the English Gold-DSI to a Brazilian Portuguese version did not require many language modifications. We only substituted some words and verbs due to adequacies in idiom grammar and the cultural context of dance training for Brazilian dance professionals. Finally, it should be noted that due to significant differences in spelling, grammar and vocabulary, the Brazilian Portuguese Gold-DSI tool does not easily allow for an application to European Portuguese populations. In this way, it differs from the UK version of the GOLD-DSI which is equally suitable for North American or Canadian populations.

CONCLUSION

The Gold-DSI-B is a reliable, short, and easy to administer research tool to measure individual differences in participatory and observational dance experience. It is equally suitable for dance teachers who need to assess the dance engagement of a new student or for researchers who conduct cross-cultural or clinical research. In particular, the Gold-DSI-B can be used to assess baseline characteristics of participants in dance intervention or rehabilitation studies to control for the effects of self-selection. People with high levels of dance experience might be more motivated and, therefore, benefit more from a specific intervention than people with little or no dance experience. Finally, culturally specific versions of the GOLD-DSI are useful to explore cultural differences in the importance of dance as a cultural practice. In many industrialized, western countries of the Northern hemisphere, dance and music have become separate art forms or even academic disciplines. The separation between formal/academic and informal/social forms of dancing or between dance and music performance may well be less important if studied worldwide. Developing culturally specific instruments like the Brazilian Portuguese Gold-DSI is an important step to better understand the role of dance and the performing arts in human societies across the world.

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