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Culturally Appropriate Assessment of Functional Impairment in Diverse Children: Validation of the ADHD-FX Scale With an At-Risk Community Sample

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Objective:

In an effort to reduce disparities in ADHD diagnoses and treatment across cultures, the current study sought to establish initial psychometric and cultural properties of the ADHD-FX: a culturally sensitive assessment measure of functional impairment related to ADHD for diverse families. **Method:** Fifty-four Latino parents (44 mothers and 10 fathers) of school-aged children completed the ADHD-FX, as well as several other measures assessing child behavior and

parent acculturation. **Results:** The ADHD-FX demonstrated adequate reliability (as demonstrated by internal consistency and test–retest reliability), psychometric construct validity (as demonstrated by associations with theoretically related measures), and cultural validity (as demonstrated by or lack of associations with acculturation measures). **Conclusion:** Initial psychometric and cultural properties suggest that the ADHD-FX is a reliable, valid, and culturally appropriate measure to assess functional impairment related to ADHD (i.e., difficulties with academic achievement, social competence, and familial relationships) in an at-risk, school-aged population.

Keywords:

[ADD/ADHD](#), [assessment](#), [functional impairment](#), [Latino/Hispanics](#), [cross-cultural](#)

ADHD is a common and pervasive mental health disorder affecting approximately 5% of children worldwide ([American Psychiatric Association \[APA\], 2013](#); [Faraone, Monuteaux, Biederman, Cohan, & Mick, 2003](#); [Willcutt, 2012](#)). Despite the seemingly universal prevalence of the disorder, rates in ADHD diagnoses and treatment vary widely across ethnic and cultural groups ([Bloom, Jones, & Freeman, 2013](#); [Stevens, Harman, & Kelleher, 2005](#)). Certain populations, such as Latino youth, appear especially vulnerable to under-identification and under-diagnosis of ADHD ([Bloom et al., 2013](#); [Haack & Gerdes, 2011](#); [Rothe, 2005](#); [Stevens et al., 2005](#)). Experts posit that this disparity likely is the result of cross-cultural problem recognition and response-style differences rather than true etiological differences, especially when ADHD assessments are based on symptom rating scales only ([Haack & Gerdes, 2011](#); [Willcutt, 2012](#)). Given that an ADHD diagnosis almost always is a necessary precursor to ADHD treatment, culturally universal ADHD assessment tools appear warranted to reduce mental health disparities in ADHD treatment across cultures.

In 2014, Haack, Gerdes, Lawton, and Schneider (in press) developed a culturally appropriate assessment measure for diverse children with ADHD: the ADHD-FX. The measure was designed to assess aspects of functional impairment most relevant to children with ADHD (i.e., academic, social, and family problems), given research suggesting impairment is a more culturally universal and less biased construct than ADHD symptomatology ([Gerdes, Lawton, Haack, & Hurtado, 2013](#); [Rothe, 2005](#); see [Haack & Gerdes, 2011](#), for review). Rather than translating an existing measure developed with predominantly English-speaking, European American families, researchers conducted a bottom-up, mixed-method investigation of parental perceptions of problem recognition and functional impairment related to ADHD. The investigation was conducted with a group particularly at risk for problem-recognition barriers (from here on referred to as “at risk”). Specifically, low-acculturated Latino families, or families aligning closely with traditional Latino customs and values and not to mainstream Eurocentric customs and values, were chosen as the at-risk population of interest to develop the ADHD-FX. Based on the mixed-method investigation, 32 items ultimately were created for the scale. The ADHD-FX is available in Spanish and English provides an overall impairment score, as well as subscale scores in the theoretically derived domains of academic, peer, and familial impairment. The ADHD-FX was designed to be a beneficial supplement to assessment of ADHD symptomatology with any family, but an *essential* supplement when working with populations at risk for problem-recognition barriers, such as low-acculturated Latino families ([Haack, Gerdes, Lawton, & Schneider, in press](#)).

Before a measure can be deemed appropriate for use with a given population, psychometric and cultural properties must be established. Psychometric properties of measures have long been examined in terms of reliability, or the extent to which unsystematic variance influences the measurement of a construct, as well as construct validity, or the extent to which a measure is assessing the theoretical construct of interest ([Carmines & Zeller, 1979](#); [Clark & Watson, 1995](#); [Messick, 1995](#)). The most commonly accepted tests for reliability of measures include Cronbach's measure of internal consistency (which examines the average of the intercorrelations among all of the test items) and test-retest reliability (which examines the correlations of measurement between two test administrations; [Carmines & Zeller, 1979](#); [Clark & Watson, 1995](#); [Cronbach, 1951](#)). Construct validity cannot be established with a single test or coefficient value, but rather an integration of measurements, such as convergent and discriminant validity (which examine the correlation between a test and other theoretically related and unrelated measures, respectively; [Cronbach & Meehle, 1955](#); [Messick, 1995](#)).

Although researchers have been examining psychometric properties of measures for decades, the study of cultural validity is more recent. Several processes can be used to establish cultural validity, such as examining the measure's discriminant validity with theoretically unrelated cultural factors. Specifically, if a measure is supposedly culturally universal, individuals will display a similar response style on the measure regardless of cultural background. Thus, measurement outcomes should not be associated with cultural factors (e.g., acculturation) and instead should only be associated with the construct of interest (in this case, ADHD-related impairment).

Current Study

The goal of the current study was to establish initial psychometric and cultural properties of the ADHD-FX with an at-risk, community sample. Given that Latino parents were chosen as the at-risk population of interest in the development of the ADHD-FX, initial psychometric and cultural properties were examined in a separate sample of Latino parents for the current study. The following predictions were made:

It was predicted that each theoretical subscale of the ADHD-FX (i.e., school, home, and peer) and the overall ADHD-FX would demonstrate good reliability, as evidenced by adequate internal consistency (i.e., Cronbach's α values $\geq .70$) and test-retest reliability (i.e., significant correlation coefficients between administrations $p \leq .05$). In addition, it was predicted that all subscales and the overall ADHD-FX would demonstrate adequate convergent construct validity (i.e., would correlate with theoretically related measures). Specifically, it was predicted that the ADHD-FX would be positively related to brief subscales of impairment on the Child Behavior Checklist/6-18 (CBCL/6-18; [Achenbach & Rescorla, 2001](#); Spanish translation by [Rubio-Stipec, Bird, Canino, & Gould, 1990](#); specifically the Social Problems and Rule Breaking Behaviors subscales) and the Conners-3 ([Conners, 2008](#); specifically the Learning Problems and Social Problems subscales). These subscales were chosen as the comparison measures to establish construct validity for several reasons. Despite their brevity, they provide information on various ADHD-specific impairment domains. In addition, these measures are available in Spanish and the Spanish-language versions have yielded adequate psychometric properties ([Conners, 2008](#); [Rubio-Stipec et al., 1990](#)). Finally, it was predicted that all

subscales and the overall ADHD-FX would demonstrate universal cultural properties as evidenced by discriminant validity with measures of acculturation. Specifically, it was predicted that Latino parents' responses on the ADHD-FX would not correlate with the Acculturation Rating Scale for Mexican Americans–II (ARSMa-II; [Cuellar, Arnold, & Maldonado, 1995](#)) or the Mexican American Cultural Values Scale for Adolescents and Adults (MACV; [Knight et al., 2009](#)), thus suggesting that responses on the ADHD-FX do not differ based on cultural values and background.

Method

Participants

Participants included 54 Latino parents of school-aged children in an urban setting. Briefly, 44 mothers and 10 fathers reporting a reported a mean age of 37.67 years ($SD = 7.65$) participated. The majority of the participants were of Latino, Mexican descent (87.0%). The sample was relatively variable in terms of socioeconomic variables (e.g., education level and income) and cultural variables (e.g., English proficiency and time in the United States). Of the 54 participating parents, 22 parents chose to participate at two time points to complete the test–retest portion of the study. Children chosen to be the focus of the parent-rated behavioral questionnaires included 30 boys and 24 girls (M age = 9.15 years, $SD = 2.18$). See [Table 1](#) for more detailed demographic information for parents and children.

Table 1. Parent and Child Demographics ($N = 54$).

Parent practical factors		Parent cultural factors	
Age, M (SD) ^a	37.67 (7.65)	Ethnicity, n (%)	
Gender, n (%)		Latino, Mexican descent	47 (87.0)
Female	44 (81.5)	Latino, Puerto Rican descent	3 (5.6)
Male	10 (18.5)	Latino, Other descent	4 (7.4)
Marital Status, n (%)		Time in the United States, n (%)	
Married	44 (81.5)	1–5 years	2 (3.7)
Unmarried	10 (18.5)	6–10 years	8 (14.8)
Number of children, n (%) ^a		More than 10 years	31 (57.4)
1–2	20 (37.0)	Born in the United States	13 (24.1)
3–4	24 (44.4)	Language, n (%)	
5 or more	5 (9.3)	Only Spanish	17 (31.5)
Education, n (%)		Primarily Spanish, some English	14 (25.9)
Some high school or less	15 (27.8)	Bilingual	18 (33.3)
Graduated high school/General Education Development (GED)	17 (31.5)	Primarily English, some Spanish	5 (9.3)
Some college	14 (25.9)	Only English	0 (0.0)
College or graduate degree	8 (14.8)	Cognitive acculturation M (SD) ^b	
Income, n (%)		Latino American values	3.66 (0.57)
Less than US\$20,000	22 (40.7)	Mainstream values	2.76 (0.60)
US\$20,001–US\$40,000	19 (35.2)	Behavioral acculturation M (SD) ^c	
US\$40,001–US\$60,000	6 (11.0)	Latino orientation	4.37 (0.51)
US\$60,001–US\$80,000	6 (11.0)	Anglo orientation	3.02 (0.85)
More than US\$80,000	4 (7.4)		
Child factors			
Age, M (SD)	9.15 (2.18)	Grade, n (%) ^a	
Gender, n (%)		Kindergarten–2nd grade	13 (24.1%)
Female	24 (44.4)	3rd–5th grade	23 (42.6%)
Male	30 (55.6)	6th–8th grade	13 (24.1%)

Note. ARSMa-II = Acculturation Rating Scale for Mexican Americans–II; MACV = Mexican American Cultural Values Scale for Adolescents and Adults.

^aIndicates missing data for some participants.

^bAs measured by ARSMa-II (Cuellar, Arnold, & Maldonado, 1995), with a range of 1 to 5, 5 indicating strong orientation.

^cAs measured by MACV (Knight et al., 2009), with a range of 1 to 5, 5 indicating strong orientation.

Procedure

Researchers followed multicultural guidelines (e.g., [Haack, Gerdes, Cruz, & Schneider, 2012](#); [Haack, Gerdes, & Lawton, 2014](#); [Loue & Sajatovic, 2008](#); [National Institutes of Health \[NIH\], 2002](#); [Yancey, Ortega, & Kumanyika, 2006](#)) to maximize participation of Latino parents in the current study. A partnership with a local charter school serving predominantly Latino families was established. Bilingual research assistants engaged in face-to-face recruitment by stationing information tables at school events (e.g., parent–teacher conferences, academic orientation, etc.), as well word-of-mouth recruitment (as recommended by previous studies recruiting Latino families, such as [Haack et al., 2012](#); [Haack, Gerdes, & Lawton, 2014](#); [Loue & Sajatovic, 2008](#); [NIH, 2002](#); [Yancey et al., 2006](#)).

Data collection occurred at the end of the school day at the children’s school. Following the consent process, parents completed a packet of pencil and paper questionnaires in Spanish or English based on their preference.¹ Parents were asked to choose one of their children between the ages of 6 and 12 years without a history of ADHD to be the subject of all of the behavioral questionnaires. The behavioral questionnaires were provided in counter-balanced order. Following completion of the behavioral questionnaires, participants completed the cultural questionnaires (also in counter-balanced order). Parents were compensated with a US\$20 gift card for their participation. In addition, parents were asked whether they wished to complete the ADHD-FX and one other behavioral measure again in 7 to 14 days for an additional US\$5 gift card. Interested parents set up an appointment with the research assistant and completed the procedure similarly.

Measures

Measures of interest for the current study included the ADHD-FX scale (Haack, Gerdes, Lawton, & Schneider, in press), the CBCL/6-18 ([Achenbach & Rescorla, 2001](#); Spanish translation by [Rubio-Stipec et al., 1990](#)), and the Conners–3 ([Conners, 2008](#)). In addition, the ARSMA-II ([Cuellar et al., 1995](#)) and the MACV ([Knight et al., 2009](#)) were utilized. Finally, a demographic form was used. Note that all measures were available in Spanish and English and have been validated in both languages.

ADHD-FX

The ADHD-FX (Haack, Gerdes, Lawton, & Schneider, 2016) scale contains 32 items assessing functional impairment commonly experienced by children with ADHD and their families, specifically within the domains of academic, social, and familial impairment. The scale is available in Spanish and English and instructs parents to consider how much each item affects their child in his or her everyday life (from 0 = *not at all* to 3 = *a lot*). The scale can provide an overall impairment score, as well as subscale scores in the theoretically derived domains of academic, peer, and familial impairment. Sample items include the following: (child) “doesn’t pay attention to, follow, and/or obey teacher instructions, is ignored, rejected, and/or teased by peers,” and “doesn’t effectively complete home routines/tasks (e.g., the morning routine, chores, etc.).” For a full description of measurement development and a

complete English-language version of the ADHD-FX, see Haack, Gerdes, Lawton, and Schneider (2016).

CBCL/6-18

The CBCL/6-18 ([Achenbach & Rescorla, 2001](#); Spanish translation by [Rubio-Stipec et al., 1990](#)) is a parent-report measure of the occurrence of several child behaviors, such as problems in behavioral, emotional, and social domains. It contains 112 items rated on a 3-point scale, ranging from *not true* to *very true or often true*. It results in three broadband scores for total, internalizing, and externalizing problems, as well as several of narrowband scores. Higher scores indicate greater severity on each scale. The English version of the scale has demonstrated good internal consistencies (.63-.98), good concurrent criterion validity with the ability to discriminate between referred and non-referred children, as well as good convergent construct validity with associations with *Diagnostic and Statistical Manual of Mental Disorders (DSM)* criteria and other measures of behavioral and emotional problems ([Achenbach & Rescorla, 2001](#)). In 1990, Rubio-Stipec et al. examined the Spanish translation's internal consistency and convergent construct validity with a Latino sample. The broadband internalizing and externalizing scales showed high levels of internal consistency (.89-.94), whereas the narrowband scales showed good levels (.65 and higher). The measure also demonstrated good convergent construct validity with the theoretically related Teacher Report Form/6-18 (TRF/6-18; .13-.38).

Conners-3

The Conners-3 Parent Report, Short Form is a 43-item measure assessing for ADHD and related learning, behavior, and emotional problems ([Conners, 2008](#)). The English and Spanish versions of the Conners-3 demonstrate good internal consistency (Cronbach's α coefficients ranging from .77 to .97), as well as good test-retest reliability (all correlations significant, $p < .001$). In addition, support for the validity for the Conners-3 has been demonstrated using factor analytic techniques on derivation and confirmatory samples; specifically, the Connor-3 has demonstrated the ability to reliably distinguish between children with and without ADHD.

ARSMA-II

The ARSMA-II is a 30-item self-report measure available in English and Spanish ([Cuellar et al., 1995](#)). It assesses behavioral acculturation in terms of language use, ethnic identity, and ethnic interaction. Items are rated as *not at all* (0) to *extremely often or almost always* (5). Scores result in two subscales with higher scores representing greater affiliation/orientation with the particular culture. The original ARSMA-II frames questions specifically to Mexican Americans; thus, to accommodate all Latino subgroups, the word "Mexican" was changed to "Latino." This method has been used previously and maintains good reliability (e.g., Cronbach's $\alpha = .78$; [Steidel & Contreras, 2003](#)).

The Anglo Orientation Subscale (AOS) has 13 items and assesses orientation toward the mainstream Anglo culture in the United States. The Latino Orientation Subscale (LOS) has 17

items and assesses orientation toward the traditional Latino culture. Strong internal consistencies for the AOS (.88) and LOS (.83) have been reported ([Cuellar et al., 1995](#)). In addition, construct validity was found using a sample of 379 individuals representing five generations ([Cuellar et al., 1995](#)). The internal consistency of the ARSMA–II for the current study was good (Cronbach's α values for AOS and LOS = .86 and .88, respectively).

The MACV

The MACV ([Knight et al., 2009](#)) is a 50-item self-report questionnaire to be used to measure cultural value orientations in terms of Latino American Values (LAV) and Mainstream Values (MV), which is available in Spanish and English. Items are rated as *not at all* (1) to *completely believe* (5). The LAV is made up of several subscales, including Familism, Respect, Religion, and Traditional Gender Roles. The MV scale is made up of three subscales, including Material Success, Independence/Self-Reliance, and Competition/Personal Achievement. Strong internal consistency reliability coefficients have been established for the LAV (.88), the MV (.81-.84), as well as the individual LAV and MV subscales (.50-.86) for parents. The MACV also has been shown to have good construct validity and to discriminate between immigrant and non-immigrant Latinos ([Knight et al., 2009](#)). The internal consistency of the MACV for the current study was good (Cronbach's α values ranging from .86 to .92).

Demographic form

Individual and cultural factors about participating parents and chosen children were obtained from the demographic form. Questions regarding the parent include ethnicity, generational status, language proficiency, occupation, education level, and household income. Questions regarding the child include age, gender, grade, and mental health diagnosis and treatment history.

Results

Psychometric Properties

Reliability

The reliability of each subscale of the ADHD-FX was computed in terms of internal consistency (i.e., Cronbach's α values) and test–retest reliability (i.e., correlation between two administrations given 7-14 days apart). All subscales and the overall ADHD-FX revealed adequate internal consistency levels with Cronbach's alpha values ranging from .88 to .92 (see [Table 2](#)). In addition, each subscale and the overall ADHD-FX revealed adequate test–retest reliability with correlation coefficients between Time 1 and Time 2 ranging from .77 to .91 (see [Table 2](#)).

Table 2. Psychometric and Cultural Properties of the ADHD-FX ($N = 54$).

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	Psychometric properties					
	Internal consistency	Test-retest reliability	Convergent construct validity			
	α	r_{xx}	r^a	r^b	r^c	r^d
ADHD-FX Total	.92 ^e	.88 ^{***}	.52 ^{***}	.61 ^{***}	.48 ^{***}	.19
School	.90 ^e	.89 ^{***}	.53 ^{***}	.47 ^{***}	.39 ^{***}	.24 [†]
Peer	.88 ^e	.91 ^{***}	.48 ^{***}	.57 ^{***}	.49 ^{***}	.24 [†]
Home	.89 ^e	.77 ^{***}	.53 ^{***}	.70 ^{***}	.38 ^{***}	.09
Cultural properties						
	r^f	r^g	r^h	r^i		
ADHD-FX Total	.02	.08	-.03	.01		
School	.04	.16	.03	.09		
Peer	.09	.03	.04	.10		
Home	-.01	-.06	-.10	-.12		

Note. CBCL = Child Behavior Checklist; ARSMA = Acculturation Rating Scale for Mexican Americans-II; MACV = Mexican American Cultural Values Scale for Adolescents and Adults.

^aCorrelations (r) with Social Problems subscale on the CBCL/6-18 (Achenbach & Rescorla, 2001).

^bCorrelations (r) with Rule Breaking Behaviors subscale on the CBCL/6-18 (Achenbach & Rescorla, 2001).

^cCorrelations (r) with Learning Problems subscale on the Conners-3 (Conners, 2008).

^dCorrelations (r) with Peer Problems subscale on the Conners-3 (Conners, 2008).

^eIndicates adequate reliability with $\alpha \geq .70$.

^fCorrelations (r) with the Latino Orientation subscale on the ARSMA-II (Cuellar, Arnold, & Maldonado, 1995).

^gCorrelations (r) with the Anglo Orientation subscale on the ARSMA-II (Cuellar et al., 1995).

^hCorrelations (r) with the Latino Values subscale on the MACV (Knight et al., 2009).

ⁱCorrelations (r) with the Anglo Values subscale on the MACV (Knight et al., 2009).

[†] $p < .1$. ^{**} $p \leq .01$. ^{***} $p \leq .001$.

Construct validity

Subsequently, convergent construct validity of each subscale and the overall ADHD-FX was examined with correlations with theoretically related measures (i.e., the Social Problems and Rule Breaking Behaviors subscales of the CBCL/6-18, [Achenbach & Rescorla, 2001](#); Spanish translation by [Rubio-Stipec et al., 1990](#), and Learning Problems and Peer Problems subscales of the Conners-3, [Conners, 2008](#)). All subscales and the overall ADHD-FX revealed adequate convergent construct validity with all but one of the theoretically related measures, with correlation values ranging from .38 to .70 ($p < .001$; see [Table 2](#)). None of the ADHD-FX subscales related to the Peer Problems subscale of the Conners-3, although the School and Peer subscales of the ADHD-FX trended toward significance with the Peer Problems subscale ($p = .08$ for each).

Cultural Properties

Finally, cultural properties of the ADHD-FX scale were examined with correlations between the ADHD-FX scale and measures of behavioral and cognitive acculturation (i.e., the ARSMA-II and MACV, respectively). No significant correlations emerged between any subscale or the

overall ADHD-FX and measures of behavioral/cognitive acculturation toward Latino/Anglo orientation (i.e., LOS and the AOS of the ARSMA-II, [Cuellar et al., 1995](#); and the LV subscale and the AV subscales of the MACV, [Knight et al., 2009](#); see [Table 2](#)).

Discussion

Overall, the ADHD-FX demonstrated adequate initial psychometric and cultural properties with an at-risk sample of Latino parents of school-aged children. Specifically, as predicted, all subscales and the overall ADHD-FX demonstrated adequate reliability with high levels of internal consistency and test–retest reliability. In addition, all subscales and the overall ADHD-FX demonstrated adequate convergent construct validity by significantly correlating with all but one of the theoretically related subscales of functional impairment (i.e., the Social Problems and Rule Breaking Behaviors subscales of the CBCL/6-18, [Achenbach & Rescorla, 2001](#); Spanish translation by [Rubio-Stipec et al., 1990](#); and the Learning Problems subscale of the Conners–3, [Conners, 2008](#)). These results are consistent with previous research suggesting that measures of functional impairment related to ADHD emerge as psychometrically sound when given to Latino parents (e.g., [Haack, Gerdes, Schneider, & Hurtado, 2011](#); [Solis & Abidin, 1991](#)).

There are several potential reasons that the ADHD-FX did not significantly correlate with the Peer Problems subscale on the Conners–3. First, because correlations between the Peer Problems subscale and the School and Peer subscale of the ADHD-FX trended toward significance, it may be that true relations between these scales exist and the lack of significant correlations can be explained by a lack of power in the current sample. Alternatively, although the Peer Problems subscale of the Conners–3 contains items regarding peer rejection and lack of friends, it does not seem designed to assess social skills or assertiveness. Although not all children with ADHD experience difficulties with social skills and assertiveness, these aspects often are relevant when considering the social functioning in many children with ADHD ([Pfiffner, 2008](#)). Thus, it may be that the Peer Problems subscale does not entirely address the peer construct as relevant to Latinos, which may explain the lack of significant correlations.

In addition, as predicted, the ADHD-FX demonstrated initial universal cultural properties, as demonstrated by discriminant validity with cultural measures. Specifically, none of the subscales or the overall ADHD-FX scale were significantly related to parental levels of behavioral and cognitive acculturation (as measured by the ARSMA-II, [Cuellar et al., 1995](#); and the MACV, [Knight et al., 2009](#)). These results are consistent with previous research suggesting the cultural universality of functional impairment related to ADHD in the domains of academic, familial, and social difficulties ([Arcia & Fernandez, 2003](#); [Bauermeister et al., 2005](#); [Gerdes et al., 2013](#)).

Limitations and Future Directions

Several limitations of the current study should be noted. The most notable limitation is that of the small sample size for the initial validation process. With a sample size of 54, the researchers were able to propose initial psychometric and cultural properties; however, future validation with a larger sample size is a critical next step. In addition, although the researchers

attempted to validate teacher-ratings for the ADHD-FX, the current study was unable to recruit an adequate number of teacher questionnaires to make appropriate inferences. As previous research highlights the importance of obtaining diagnostic information from multiple informants (e.g., [Pelham, Fabiano, & Massetti, 2005](#)), future studies should seek to validate the ADHD-FX as a teacher-report instrument to supplement parental reports of functional impairment. Finally, while validation in a community sample serves as an important first step, examination of the ADHD-FX's psychometric and cultural properties with clinical populations is warranted in future research.

The current study demonstrated initial psychometric and cultural properties with a population particularly at risk for problem-recognition barriers: Latino parents. Examination of the ADHD-FX's psychometric and cultural validity with other diverse populations is a crucial next step in determining the appropriateness of the measure with any family. Future validation research could target families representing other diverse ethnic and cultural backgrounds, as well as families from varied socioeconomic and need levels, alternative family structures (e.g., single parent vs. intact homes), and different regions of the United States (e.g., urban vs. rural; Midwestern vs. Coastal vs. Southern).

Conclusion

The current study was able to provide initial validation for the ADHD-FX scale, a measure designed to assess functional impairment related to ADHD (i.e., difficulties with academic achievement, social competence, and familial relationships) in an at-risk, school-aged population. Importantly, although a measure may be deemed psychometrically reliable and valid, it may not necessarily emerge as culturally valid ([Haack & Gerdes, 2011](#)). Not only did the ADHD-FX emerge as reliable and valid, impairment ratings proved unrelated to acculturation, providing evidence for universal cultural properties. Thus, the ADHD-FX appears to be a reliable and valid tool that can aid in diagnosing ADHD regardless of a reporter's cultural values, beliefs, and customs. Optimistically, administration of culturally appropriate assessment measures, such as the ADHD-FX, will reduce disparities in ADHD diagnoses and treatment for diverse children in our country.

Declaration of Conflicting Interests

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Notes

All analyses were examined between Spanish and English versions and no differences emerged.

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