

# PILOT VALIDATION STUDY FOR THE SPANISH-LANGUAGE CDI-2 AMONG ADOLESCENTS FROM PUERTO RICO\*

## ESTUDIO PILOTO DE VALIDACIÓN DEL CDI-2 EN ESPAÑOL ENTRE ADOLESCENTES DE PUERTO RICO

Recibido: 14 de diciembre de 2019 | Aceptado: 20 de julio de 2020

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### ABSTRACT

The Children's Depression Inventory-2 (CDI-2) was validated and standardized for U.S. children. Although some data is available on its Spanish-language 12-item short form, the psychometric properties of the Spanish full-length form (28-item) are unknown. We examined the internal consistency (alpha coefficient) and concurrent validity of the Spanish-language CDI-2 among 51 Puerto Rican youth (aged 12-18 years), recruited from a public school, a private school, and a local church. Scores on the Reynolds Adolescent Depression Scale-2 (RADS-2) were used as concurrent validity criteria. We found alpha coefficients of .84, .74 and .76 for the Total, Emotional Problems, and Functional Problems scores, respectively. Corrected item-total correlations from .13 (*Arguments with friends*) to .69 (*Feeling lonely*) were observed. Reliability coefficients for subscales ranged from .58 (*Interpersonal Problems*) to .65 (*Ineffectiveness and Negative Self-Esteem*). CDI-2 and RADS-2 scores correlated .87. Correlations between RADS-2 scores and CDI-2 subscales ranged from .66 to .70 ( $p \leq .001$ ). Similar validity coefficients were found for the short form ( $\alpha = .68$ ). Our initial report on the Spanish full-length CDI-2 suggest that its psychometric properties with Puerto Rican adolescents may be similar to those of the original Spanish CDI and those reported for Hispanics using the English-language CDI-2.

**KEYWORDS:** Children's Depression Inventory-2, Hispanics, psychometric properties.

### RESUMEN

El *Children's Depression Inventory-2* (CDI-2) fue validado y estandarizado para jóvenes de Estados Unidos. Aunque existen datos psicométricos de su forma corta (12 ítems) traducida al español, no hay datos similares sobre la estándar (28 ítems). Examinamos la consistencia interna (coeficiente alfa) y validez concurrente del CDI-2 en español en 51 jóvenes puertorriqueños/as de 12-18 años, reclutados/as en una escuela pública, una privada y una iglesia. Utilizamos el *Reynolds Adolescent Depression Scale-2* (RADS-2) como criterio de validez. Encontramos coeficientes alfa de .84, .74 y .76 para el CDI-2 Total, los Problemas Emocionales y los Problemas Funcionales, respectivamente. Observamos correlaciones corregidas ítem-total entre .13 (*Discusiones con amigos/as*) y .69 (*Sentirse solo/a*). Los coeficientes alfa para las subescalas fueron de .58 (*Problemas Interpersonales*) a .65 (*Inefectividad y Auto-estima Negativa*). El CDI-2 y el RADS-2 correlacionaron .87. Las correlaciones entre el RADS-2 y las subescalas del CDI-2 fueron de .66 a .70 ( $p \leq .001$ ). Obtuvimos coeficientes de validez similares para la forma corta ( $\alpha = .68$ ). Nuestro estudio piloto sobre la forma estándar del CDI-2 en español sugiere propiedades psicométricas con adolescentes puertorriqueños/as similares a las del CDI original en español y a las reportadas para hispanos/as utilizando el CDI-2 en inglés.

**PALABRAS CLAVE:** Adolescentes, *Children's Depression Inventory-2*, hispanos/as, propiedades psicométricas.

\* A preliminary version of this work was presented at the 61st Annual Convention of the Puerto Rico Psychology Association. Work in this article was possible thanks to funds granted to the Institute for Psychological Research by the President of the University of Puerto Rico, and to funds granted to the first author by the National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health, under award number R03DK092547. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. The authors have no conflict of interest to disclose.

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For over 40 years, the Children's Depression Inventory has been a widely used self-report (SR) measure for screening depressive symptomatology. Its psychometric properties have been studied extensively not only for its English-language version but also for translations/adaptations into at least 25 other languages, with some cross-cultural equivalence of score reliability (Myers & Winters, 2002; Sun & Wang, 2015). Ten years ago, a second edition, known as the CDI-2 SR, was published (Kovacs, 2010). It was standardized among 1,100 youths aged 7 to 17 years from the U.S. (with a race/ethnicity distribution similar to the U.S. 2000 Census) and also administered to a clinical sample of 319 youths (Kovacs & MHS Staff, 2011), for a total sample of 1419.

After systematically reviewing the literature, we found 252 reports published until July 2019 about the use of the CDI-2 SR, in either its full-length or short form, including 50 reports on CDI-2 versions other than the English- or Spanish-language ones (Cumba-Avilés, 2020). Independent studies that directly support the reliability and validity of the new edition have not been published, are unavailable in electronic databases, or were not published in English (e.g., Camuffo, Cerutti, & Spensieri, 2018). Psychometric data drawn from most studies are incidentally reported, creating difficulties in access through purposive electronic searches and imposing manual revision of many full-texts to find any meaningful data. As argued by Morelen (2017), until recently there were "no known published studies that explicitly sought to examine the psychometric properties of this revised version of the CDI" (p. 3). Among the few exceptions, the most salient is the recently published study on the Korean-language version of the CDI-2 (Kim, Lee, Hwang, Hong, & Kim, 2018). This lack of independent studies on the psychometrics of the CDI-2 has forced most clinicians and researchers to rely exclusively upon psychometric data provided in the technical manual (Kovacs & MHS Staff, 2011) with summaries in some published test reviews (Atlas, 2014; Bae, 2012; Kovacs,

2015) or scientific presentations (Lam & Kovacs, 2011).

Since the mid 1980's, several Spanish-language versions of the original full-length CDI are in use throughout Spain, most Latin American countries, the U.S., and Puerto Rico. Reports of the CDI's psychometric properties show adequate to excellent internal consistency and criterion-related validity (Davanzo et al., 2004; Frías, del Barrio, & Mestre, 1991; López, 1986; Masip, Amador-Campos, Gómez-Benito, & Del Barrio Gándara, 2010; Politano, Edinger, & Nelson, 1989; Rivera-Medina, Bernal, Rossello, & Cumba-Avilés, 2010). Also, there is published data on the psychometrics of the Spanish 10-item form of the original CDI (Del Barrio, Roa Capilla, Olmedo, & Colodrón, 2002; Yáñez Botello et al., 2017). Since the Spanish-language version of the CDI-2 was published, few studies have reported on its use. Its psychometric data have been drawn from studies using the 12-item form (Cumba-Avilés, 2020).

To date, in only seven studies, the use of the CDI-2 (in either English or Spanish) have been reported in samples comprised mostly or entirely by Hispanic youth (Table 1). Two of those studies were dissertations (Marchante-Hoffman, 2018; Scanlon, 2016) and five were peer-reviewed articles. All were written in English and all samples were entirely Hispanic. In each study, more girls than boys were recruited, with an average sex ratio among samples of 5.6:4.4.

TABLE 1.  
Published Studies Reporting about the Use of the Children’s Depression Inventory-2 Self-Report among Hispanic Youth Samples.

Study	Sample	Measures	Internal Reliability	Validity	Other Relevant Information
Park, Wang, Williams, & Alegría (2017)	269 adolescents of Mexican origin; ages 12 to 17 years ( $M = 14.1$ ); 71.0% US born; 56.9% girls; most parents had a high school education or less; recruited in public schools, churches, and community-based organizations in a mid-sized Midwestern region in the U.S.S	CDI-2 SF (EV & SV), PRaCY, MASC-10, STAXI-2 C/A	Alpha of .81 (T1; $N = 269$ ), .76 (T2, $N = 246$ ), and .81 (T3, $N = 246$ ), respectively	Depression scores were positively related with anxiety (.39 - .51), discrimination (.33 - .39) and outward anger expression (.47 - .50) considering three time points. They were negatively related with anger control (-.16 to -.24 at T2 & T3). Correlation at T1 was non-significant (-.10).	Only six youths completed the survey in Spanish via face-to-face interviews with a bilingual interviewer or a Spanish language written questionnaire.
Marchante-Hoffman (2018)	152 first generation foreign-born Latino youth aged 8 to 17 years ( $M = 13.02$ years); 53% girls; 65.8% from Venezuela; low income patients of a Mobile Clinic in South Florida	CDI-2 SF (SV), CSI-24, FAD-GF, ASS, SPC, UCLA PTSD RI-DSM-5	Alpha = .80	Positively related with somatic symptoms (.60), sleep problems (.48), number of PTE (.44), severity of PTSD symptoms (.65), and acculturative stress (.46), and negatively related to family functioning (-.31).	About 90.8% preferred to complete the scale in Spanish. Sample mean score was similar to the U.S. normative sample.
Suárez-López et al. (2019)	529 adolescents aged 11 to 17 years (median age = 14.38 years); 51% girls; from a rural, low-income county in the Ecuadorian Andes	CDI-2 SF (SV), AChE activity (finger-stick sample); MASC-2	Alpha = .69, $N = 516$ (Data provided by the first author)	A 1.09 T score increase per $SD$ decrease of AChE, and a 2.11 T score decrease per $SD$ increase of AChE was found in CS and longitudinal data, respectively. CDI-2 SF correlated .22 with MASC-2 scores ( $p \leq .001$ )	Associations between AChE and CDI-2 scores were stronger among girls and younger children (< 14.38 years old).
Tropez-Arceneaux, Castillo-Alaniz, Icaza, & Murillo (2017)	33 Hispanic youth (aged 12-25 years) who have suffered burns and participate in a burn camp in Nicaragua; 58% girls; 79% from urban zones; 61% ( $n = 20$ ; aged 12 to 17 years) completed the SR	CDI-2 SR (SV), CDI-2 Parent version (SV)	No data reported	No data reported	Lower parent-rated CDI-2 scores at 6-months post camp. Analyses for youth who completed the CDI-2 SR were not provided.
Scanlon (2016)	141 Hispanic children aged 9 to 13 years ( $M = 10.92$ years); 56.7% girls; SES reflected a predominantly middle-class sample; recruited from a community in West Texas; only one child completed the SV.	CDI-2 SR (EV & SV), SCS, PARQ/Control, RCMAS-2, SASC-R	Alpha = .87	Negative correlations with youth reports of independent (-.35) and interdependent (-.28) self-construal. Positive associations with self-reports of manifest (.63) and social (.47) anxiety, maternal hostility/rejection/neglect (.55) and acceptance problems (.43), and with mothers’ reports of child anxiety symptoms (.27). Scores were higher for children with Hx of psychological treatment.	Correlation of .40 between CDI-2 SR and CDI-2 maternal report. Mean score was 8.85 ( $T = 54.76$ ), which was higher than the one reported for the normative sample and for age- and sex-defined subgroups.
Zayas, Aguilar-Gaxiola, Yoon, & Rey (2015)	83 US-born citizen-children of Mexican origin, aged 8-15 years ( $M = 11.4$ ); more than 60% were girls; youth either lived in México with deported parents ( $n = 31$ ), lived in the US but have a parent affected by detention or deportation ( $n = 18$ ), or lived in the US with undocumented parents that were not under removal proceedings ( $n = 34$ )	CDI-2 SR (EV & SV); other measures were used but relationships with CDI-2 scores were not examined	Alpha = .86	Youth affected by a parent’s deportation or detention ( $n = 49$ ) reported significantly higher scores their counterparts ( $n = 34$ ) in CDI-2 Total and Emotional Problems scores, and in the Negative Mood/Physical Symptoms and Negative Self-Esteem subscales.	No information was published about how many youths completed the scale in Spanish. Nobody endorsed the item 8 (suicide ideation or intent). Alpha, thus, was estimated with 27 items.
Gulbas et al. (2016)	48 US-born children of Mexican origin, aged 8 to 15 years ( $M = 11.3$ years); 58.3% girls; youths with extreme high or low T scores (selected from Zayas et al.’s sample) were classified as probably depressed ( $n = 16$ ) or not depressed ( $n = 32$ )	CDI-2 SR (EV & SV); qualitative data was collected via individual interviews	Alpha = .92	Half of youth with probable depression cited the stressed relation with parents as a factor that was salient to their experience of suffering, compared with 9% of those without depressive symptoms.	Same as above; 50% of youths had undocumented parents affected by detention/deportation and 50% had undocumented parents that did not.

Note. Only results with at least one significant correlation showing an absolute value  $\geq .20$  were considered as meaningful evidence of validity. Only measures that were analyzed in relation to CDI-2 scores are included. CDI-2 = Children’s Depression Inventory-2; SF = Short Form; SR = Full-Length Self-Report; EV = English Version; SV = Spanish Version; T = Time; PRaCY = Perceptions of Racism in Children and Youth; MASC-10 = Multidimensional Anxiety Scale for Children-10 item version; STAXI-2 C/A = State-Trait Anger Expression Inventory-2 Child/Adolescent version; CSI-24 = Children’s Somatization Inventory; FAD-GF = Family Assessment Device-General Functioning Scale; ASS = Acculturative Stress Scale; SPC = Sleep Problems Composite (2-items); UCLA PTSD RI-DSM-5 = UCLA Post-Traumatic Stress Disorder Reaction Index for DSM-5; PTE = Potentially Traumatic Events; AChE = Acetylcholinesterase; MASC-2 = Multidimensional Anxiety Scale for Children, second edition; CS = Cross-sectional; SASC-R = Social Anxiety Scale for Children-Revised; PARQ/Control = Parental Acceptance and Rejection/Control Questionnaire; Inventory; SCS = Self-Construal Scale; RCMAS-2 = Revised Child Manifest Anxiety Scale, second edition; Hx = History.

In three of those studies, researchers used the CDI-2 short form: two samples completed mostly or only the Spanish version and one completed mostly the English version. In studies that used the Spanish short form with most or all participants, alpha coefficients from .69 (Suarez-Lopez et al., 2019) to .80 (Marchante-Hoffman, 2018) were obtained. Also, coefficients from .76 to .81 were reported in the study in which the English short form was used (Park, Wang, Williams, & Alegría, 2017). In all these studies, some evidence of criterion-related validity was found via correlation or regression analysis. Two of the three samples were comprised exclusively by adolescents (Park et al., 2017; Suarez-Lopez et al., 2019), and the third by a combination of pre-pubertal children and adolescents (Marchante-Hoffman, 2018). Most participants were from middle-low or low socioeconomic status and the samples comprised over 120 participants (a ratio of more than 10 items per participant for the short form). Participants in two cases were recruited in the U.S. (Marchante-Hoffman, 2018; Park et al., 2017). In one study, youth were recruited in Ecuador (Suarez-Lopez et al., 2019).

In the other four studies, researchers administered the full-length CDI-2: three using mostly the English version and one using the Spanish version. In studies in which the English full-length form was mainly used, alpha coefficients from .86 (Zayas, Aguilar-Gaxiola, Yoon, & Rey, 2015) to .92 (Gulbas et al., 2016) were reported. In the last two reports, criterion-related validity was documented via group comparisons, while, in the third one, correlation coefficients were also provided (Scanlon, 2016). These studies used samples that combined pre-pubertal children and adolescents. In the study that reported the use of the Spanish version, only participants aged 12 to 17 years (61%) completed the scale. Still, no psychometric data was reported (Tropez-Arceneaux, Castillo Alaniz, Icaza, & Murillo, 2017). Less than 140 participants comprised three of four samples: a ratio of less than five participants

per item (Gulbas et al., 2016; Tropez-Arceneaux et al., 2017; Zayas et al., 2015). One sample ( $N = 141$ ) had at least five participants per item (Scanlon, 2016). Participants in three of these four studies lived under very stressful circumstances, either for having suffered burns (Tropez-Arceneaux et al., 2017) or for having undocumented parents and economic hardship (Gulbas et al., 2016; Zayas et al., 2015). The latter two samples were recruited partially from the U.S. and México, while the former was from Nicaragua. The final sample was recruited entirely in the U.S. (Scanlon, 2016).

Findings from studies in which the CDI-2 has been used among Hispanic samples reveal essential facts. Although studies reviewed included adolescents (either alone or combined with pre-pubertal children or young adults), none included a sample comprised exclusively by pre-pubertal children. Second, although four studies combined pre-pubertal children and adolescents, including three that reported psychometric data for the full-length CDI-2, none segregated their findings by developmental group. Third, no study has used scores on another self-report measure of depression as validity criteria. The only research that estimated correlations ( $r = .40$ ) among CDI-2 self-reports and other youth depression scores used the Parent version of the CDI-2 as criterion (Scanlon, 2016). Also, 11 distinctive validity criteria were documented across three studies using the CDI-2 short form (in either English or Spanish) and eight across the studies using the Spanish short form, all comprising an age range that included adolescents aged 12-17 years. However, although 10 distinctive validity criteria were documented across four studies using the full-length form, eight were documented in a single sample with an age range of 9-13 years and excluding youth aged 14 and over. Thus, this suggests that evidence on the validity on the English-language CDI-2 standard form among Hispanics is weaker for adolescents than for children. Finally, no study currently published

has reported data on the psychometric properties of the Spanish-language CDI-2 full-length form with Hispanic children or adolescents for whom Spanish is their native language, in either the U.S. or other countries.

Puerto Ricans are the second-largest Hispanic group in the U.S., with 5.8 million living in the mainland (U.S. Census Bureau, 2019b). As of July 1, 2019, Puerto Rico population was 3.2 million (U.S. Census Bureau, 2020). About 98.9% of children < 18 years old in Puerto Rico are Hispanics, and 56.9% live in households whose income was below poverty levels in the past 12 months (U.S. Census Bureau, 2019c). Most recent American Community Survey 5-year estimates (2014-2018) show that about 3.51% of children aged 5 to 17 years in Puerto Rico spoke only English at home and that among those who spoke Spanish at home 80.16% spoke English less than very well and 48.14% did not speak English at all (U.S. Census Bureau, 2019a).

Although within that past 34 years at least three Spanish versions of the CDI have been used in Puerto Rico (Lopez, 1986; Rosselló, Guisasola, Ralat, Martínez, & Nieves, 1992; Soto-Molina, Rodríguez-Gómez, & Vélez-Pastrana, 2009), to date, the Spanish-language CDI-2 is not validated for youth living in the Island. As a minimal portion of our children speaks English at home and as most children who speak Spanish speak English less than very well, and many do not speak English at all, efforts to validate the Spanish CDI-2 among youths would be responsive to the needs of most of our children. Our knowledge about the psychometric properties of the full-length CDI-2 among Hispanics was derived from using mainly the English version. Thus, it is unknown to what extent estimates on the reliability and validity of that version would apply to Spanish-speaking youth who complete the Spanish version of the scale. Providing data on the psychometrics of the Spanish CDI-2 could inform assessments and studies conducted on the Island, and also with other Spanish-speaking Hispanic youth living in the U.S. and other countries.

In this study, we conducted a preliminary assessment of the internal consistency and concurrent validity of the Spanish version of the CDI-2 (self-report form) among Spanish-speaking Hispanic adolescents from Puerto Rico. We assessed these psychometric properties for the full-length scale and for the 12 items included in the short form. Considering the small size of our sample, we expected to obtain an alpha coefficient  $\geq .80$  for the Total score, values  $\geq .70$  for the Emotional and Functional Problems scales, and somewhat lower coefficients (but  $\geq .60$ ) for most of the specific subscales. We also hypothesized significant, positive and mostly moderate-high or high correlations between CDI-2 scores and those from another valid and reliable self-report rating scale used to assesses depressive symptoms among adolescents.

## METHOD

### Participants

Participants were 51 Puerto Rican youths (50.98% girls) aged 12-18 years ( $M = 14.74$ ;  $SD = 1.64$ ). About 56.86% (29) were aged 12 to 14 years. They coursed junior-high (grades 7 to 9;  $n = 30$ ) or high-school grades. Youth were recruited by convenience from a public school (San Juan Metro area), a private school (South area of Puerto Rico) and a local church (Northeast area). Thirty-two (62.75%) attended a public school. Twenty-three (45.10%) lived in municipalities of the San Juan metropolitan area (i.e., San Juan, Bayamón, Guaynabo, Carolina, Cataño or Trujillo Alto) and 66.67% lived in urban zones. To participate youth must be able to read in Spanish but not have any neurological, sensory, cognitive or physical problem that could affect participation.

About 64.71% (33) lived in households with biological/foster parents who were married and in 3.9% (2) of the cases parents just lived together. Other youth lived in households in which parents were either divorced ( $n = 10$ ), separated ( $n = 4$ ) or widowers ( $n = 2$ ). Women guardians

(biological mothers) were present in all households and were the primary caregivers. Most of them perceived that their family belonged to a medium-high (45.10%) or medium-low (47.06%) socio-economic status (SES), while 7.84% reported a low SES. Among caregivers (96.08% Puerto Ricans), 70.59% had a full-time job, and 15.69% had a part-time one. Their mean schooling was 16.61 years ( $SD = 2.15$ ) and their mean age was 43.31 years ( $SD = 4.58$ ; range from 32 to 53). Mean household size was of 4.16 members ( $SD = 0.92$ ; range from 2 to 8). Primary caregivers completed the Socio-demographic Data Form (SDDF).

#### Measures

##### **Children's Depression Inventory-2 (CDI-2).**

This scale measures depressive symptoms in youth aged 7-17 years within the past two weeks ( $\alpha = .91$ ). Its 28 items provide response options scored as 0, 1 or 2; higher scores reflect more severity. The CDI-2 has two higher-order scales known as Emotional ( $\alpha = .85$ ) and Functional Problems ( $\alpha = .83$ ), which correlation is .77. The first includes the Negative Mood/Physical Symptoms ( $\alpha = .75$ ) and the Negative Self-Esteem ( $\alpha = .77$ ) subscales. The second one has subscales on Ineffectiveness ( $\alpha = .76$ ) and Interpersonal Problems ( $\alpha = .73$ ). Alpha values from .67 to .92 were obtained for these scores within total sample subgroups. The short form ( $\alpha = .82$ ) correlated .95 with the Total score of the full-length form. Along with data on its test-retest reliability, its technical manual documents the concurrent validity of the English version. Total scores correlated positively with scores on the Beck Depression Inventory-Youth (.37) and the Conners Comprehensive Behavior Rating Scales Major Depressive Episode score (.58) within a sample of  $N = 266$ . Subscales inter-correlations were from .58 to .69. We used the Spanish CDI-2, which was the product of a back-translation and careful revision process to ensure cultural sensitivity, readability and content appropriateness to the various Spanish-speaking groups in the U.S. (Kovacs & MHS Staff, 2011).

##### **Reynolds Adolescent Depression Scale-2 (RADSD-2).**

This 30-item self-report measures depressive symptoms in youth aged 11 to 20 years (Reynolds, 2002). With the same content as the first edition, it was re-standardized with a school-based sample of 3,300 youth, stratified to reflect 2000 U.S. Census statistics for gender and ethnicity. Its items are rated in a scale from 1 (*Almost never*) to 4 (*Most of the time*). The RADSD-2 yields four subscales scores: Dysphoric Mood, Anhedonia/Negative Affect, Negative Self-Evaluation, and Somatic Complaints. Its technical manual provides data about its test-retest reliability and about its content, criterion-related, construct, and clinical validity (Reynolds, 2002). In the standardization sample, its Total score showed an alpha of .92, with coefficients that ranged from .79 (Somatic Complaints) to .89 (Anhedonia/Negative Affect) for its subscales. A 10-item version of the RADSD-2 is available ( $\alpha = .84$ ). Spanish versions have been used in Spain (Figueras-Masip, Amador-Campos, & Peró-Cebollero, 2008) and Puerto Rico (Ruiz-Fontanet, 1990), among others countries. In a clinical sample of adolescents from Puerto Rico, its alpha value was .86 (Feliciano-López & Cumba-Avilés, 2014). In this sample, a coefficient of .89 was obtained for the full-length form and of .82 for the items that comprise the short form.

##### **Suicidality/Self-Destructiveness Scale (ISAD by its Spanish acronym).**

This 14-item rating scale assesses suicidality and self-destructive behaviors and thoughts within the previous 14 days. Items are rated using a scale from 0 (*Never*) to 3 (*Very often*). Items 1 through 7 assess morbid ideas and non-suicidal self-harm thoughts, while items 8 through 14 assess suicidal ideas and behavior. Its internal consistency is of .90 (Feliciano-López & Cumba-Avilés, 2014).

##### **Suicide Risk Interview Schedule for Adolescents (FERSA by its Spanish acronym).**

We used the FERSA during the interview to assess the lethality of suicidal ideation/behavior (if present). Its development

and details about questions in the suicide-risk assessment protocol are described in Cumba-Avilés and Feliciano-López (2013). Our adapted protocol for the current study followed guidelines used in previous studies conducted with youths at schools (see below).

**Procedure.** After the IRB of our campus approved the research protocol (#1213-209), we met with school authorities to explain study procedures, including exclusion criteria, and obtain their cooperation. During orientation to potential participants, we explained study procedures and gave them an envelope with the SDDF, Consent/Assent Forms, and informational sheets. Each youth was instructed to deliver to his/her guardian this envelope to authorize their participation and complete the SDDF. Teens signed the forms if they assented to participate and handed over documents in the same envelope to authorized school staff, who called research staff to pick them up at school. In each school, we scheduled orientations and scales administration dates in coordination with school authorities. The assessment session was in a self-report format and lasted about 20 minutes. To recruit participants from the local church, study procedures were explained first to church authorities. Their authorization was obtained to orientate potential participants in a juvenile meeting coordinated with previous knowledge of the adolescents and their parents. After the orientation was conducted, potential participants received their envelopes and were instructed to proceed in the same way described earlier for youth recruited in schools.

As in a previous pilot study (Cumba-Avilés & Feliciano-López, 2013), we conducted in-depth interviews to assess risk only with youth who reported suicide ideation/behavior within the previous 14 days. Those presenting significant depressive symptoms and no suicidal ideation were instructed to ask for specific help from a mental health professional using phone numbers in the informative sheets provided. Referrals were provided if solicited. The presence of suicide ideation or self-harm thoughts was first examined by

detecting any response  $\geq 1$  on item 8 of the CDI-2 or any response  $\geq 2$  on item 14 of the RADS-2. Those who endorsed any of these items were asked to complete the ISAD. Research staff identified youths who scored  $\geq 1$  on any of items 8 through 14 of the ISAD. They were told privately to follow a research staff member to a room previously identified by school/church authorities to conduct the risk assessment. Only two cases completed the ISAD. Both needed an in-depth risk assessment, but risk was low.

#### Data Analysis

We used SPSS 24.0 for conducting statistical analyses. Data screening revealed no missing values. First, we obtained descriptive statistics for all CDI-2 scores and individual items, as well as for the time adolescents needed to complete the scales. To assess internal consistency, we used Cronbach's alpha, corrected item-subscale (CISSC), corrected item-scale (CISC), and corrected item-total correlations (CITC). Alpha coefficients were estimated for the Total score, higher order scales, and specific subscales of the CDI-2, but also for the group of 12 items that comprised the CDI-2 short form. To examine concurrent validity, we observed relationships between CDI-2 scores and those on the RADS-2, using Pearson  $r$  ( $p \leq .05$ ; two-tailed). We also conducted these analyses for items included in the Spanish CDI-2 short form.

## RESULTS

#### Time to Complete Instruments and Descriptive Analysis for Scales Scores

Mean time elapsed for filling out both scales was 10 min and 6 s ( $SD = 3$  min and 9 s), with a range from 5 min and 9 s to 17 min and 51 s. Mean time that adolescents used to complete the CDI-2 was 5 min with 23 s ( $SD = 1$  min and 53 s), with a range from 2 min and 34 s to 10 min and 40 s. The average time to complete the RADS-2 was 4 min and 43 s ( $SD = 1$  min and 38 s), with a range from 1 min and 56 s to 7 min and 12 s.

Mean raw score for the CDI-2 Total score was 7.29 ( $SD = 5.43$ ), with mean scores of 3.49 ( $SD = 3.08$ ) and 3.80 ( $SD = 3.05$ ) for the Emotional and Functional Problems scales, respectively. Mean scores for the subscales were as follow: 2.09 ( $SD = 2.10$ ) for Negative Mood/Physical Symptoms, 1.41 ( $SD = 1.47$ ) for Negative Self-Esteem, 3.10 ( $SD = 2.24$ ) for Ineffectiveness and .71 ( $SD = 1.25$ ) for Interpersonal Problems. Mean raw score for the 12-item CDI-2 was 3.29 ( $SD = 2.56$ ), while this value for RADS-2 Total score was 46.61 ( $SD = 10.78$ ) and 14.35 ( $SD = 3.86$ ) for its short form. Mean CDI-2 Total raw scores for adolescents aged 12-14 years and those aged 15-18 years were 7.31 ( $SD = 5.92$ ) and 7.27 ( $SD = 4.84$ ), respectively. Means of 6.08 ( $SD = 3.58$ ) and 8.46 ( $SD = 6.62$ ) were observed for boy and girls, respectively. Mean T scores (using U.S. norms) for the full-length and the short form of the CDI-2 were 50.00 ( $SD = 7.81$ ) and 49.94 ( $SD = 7.28$ ), respectively. Total raw scores and T scores on the full-length CDI-2, its short version, and the RADS-2 did not differ significantly (two-tailed tests) by biological sex, adolescent's age, urban/rural profile, municipality zone (metropolitan vs. nonmetropolitan), school type, perceived SES, caregiver's education and age, or household size.

#### Internal Consistency and Items Statistics

The full-length CDI-2 Total score showed an internal consistency of .84. Mean inter-item correlation (MIIC) was .17. Internal consistency coefficients for the Emotional Problems scale and the Functional Problems scale were .74 and .76, respectively, with MIICs of .18 and .19. Alpha values were of .63, .65, .65, and .58 for the Negative Mood/Physical Symptoms, Negative Self-Esteem, Ineffectiveness, and Interpersonal Problems subscales, in that order (see Table 2). CITC ranged from .13 (item 25, *Get into arguments with friends*) to .69 (item 19, *Feels lonely*), with a mean of .39. Deleting any item did not increase the alpha coefficient for the Total score.

CISC from .21 (item 8, *Suicide ideation/intent*) to .55 (item 27, *Can't stop eating*) were observed for the Emotional Problems scale (which includes the Negative Mood/Physical Symptoms and Negative Self-Esteem subscales), with a mean of .37. Yet, it was item 18 (*Somatic worries*) which if deleted would slightly increase alpha coefficient for this scale, and specially the alpha value of the Negative Mood/Physical Symptoms subscale (in a magnitude of .03). CISSC from .16 (item 18) to .60 (item 27) were obtained for this subscale, with a mean of .35. These values were from .18 (item 24, *Feeling unloved*) to .60 (item 2, *Hopelessness*) for the Negative Self-Esteem subscale, with a mean of .39. Without item 18, this subscale would increase its alpha by a size of .02. MIICs for the Negative Mood/Physical Symptoms and the Negative Self-Esteem subscales were of .20 and .22, respectively.

CISC from .19 (item 25, *Get into arguments with friends*) to .60 (item 28, *Memory problems*) were observed for the Functional Problems scale (which includes items from the Ineffectiveness and Interpersonal Problems subscales), with a mean of .37. Although deleting any item did not increase the alpha coefficient for this higher-order scale, without item 25 the alpha value for the Interpersonal Problems subscale would increase from .58 to .62. For this subscale, CISSC ranged from .08 (item 25) to .44 (item 19), with a mean of .34. Values from .17 (item 22, *Academic problems*) to .53 (item 28) were observed for the Ineffectiveness subscale, with a mean of .34. Deleting item 22 would slightly increase the internal reliability of this subscale. MIICs for the Ineffectiveness and the Interpersonal Problems subscales were of .19 and .20, respectively.

Means scores observed for the 28 items of the CDI-2 ranged from .04 (item 1, *Sadness*) to .61 (item 28, *Memory problems*). Items with the highest mean scores were more prone to be located on the Ineffectiveness subscale, while a higher percent of items from the Interpersonal Problems subscale (4 of 5)



presented mean scores of .20 or below. Among items assessing areas from Criterion A for Major Depression, those assessing irritable mood (#10), hopelessness (#2), and anhedonia (#4 and #20) obtained higher means than those assessing sadness (#1 and #9). Six of the 12 items that belong to the CDI-2 short form (those whose numbers are

identified in italics on Table 2) showed mean scores above .20, and only two obtained mean scores below .10. Alpha coefficient for the 12-item CDI-2 was .68 with a MIIC of .18. CITC within the 12-item version ranged from .15 (item 12, *Cannot make up his/her mind about things*) to .59 (item 19, *Feels lonely*), with a mean of .35.

TABLE 2.  
Descriptive and Internal Consistency Statistics for the Children’s Depression Inventory-2 Items.

Children’s Depression Inventory-2nd Edition Items	M	SD	CISSC	ASSID	CISC	ASID	CITC
<i>Negative Mood/Physical Symptoms</i> (α = .63)							
1. I am sad all the time	.04	.20	.46	.60	.48	.73	.55
9. I feel like crying every day	.08	.34	.37	.60	.37	.73	.45
10. I feel cranky all the time	.27	.45	.37	.59	.45	.72	.41
15. I have trouble sleeping every night	.31	.55	.33	.60	.31	.73	.32
16. I am tired all the time	.43	.64	.29	.62	.32	.74	.25
17. Most days I do not feel like eating	.12	.33	.29	.61	.22	.74	.29
18. I worry about aches and pains all the time	.51	.67	.16	.66	.24	.75	.20
26. I fall asleep during the day all the time	.18	.43	.33	.60	.32	.73	.24
27. Most days I feel like I can’t stop eating	.14	.35	.60	.55	.55	.71	.48
<i>Negative Self-Esteem</i> (α = .65)							
2. Nothing will ever work out for me	.39	.49	.60	.51	.52	.71	.53
6. I hate myself	.12	.33	.44	.60	.28	.73	.25
7. All bad things are my fault	.25	.44	.40	.60	.29	.73	.34
8. I want to kill myself	.06	.24	.24	.65	.21	.74	.34
13. I look ugly	.53	.54	.46	.58	.46	.71	.49
24. Nobody really loves me	.06	.31	.18	.67	.46	.72	.48
<i>Ineffectiveness</i> (α = .65)							
3. I do everything wrong	.18	.39	.26	.64	.25	.75	.34
4. Nothing is fun at all	.43	.54	.36	.62	.35	.74	.42
12. I cannot make up my mind about things	.53	.50	.31	.63	.33	.75	.30
14. I have to push myself all the time to do my schoolwork	.55	.64	.31	.64	.35	.75	.29
20. I never have fun at school	.25	.44	.41	.61	.50	.73	.38
22. I do very badly in subjects I used to be good in	.14	.40	.17	.66	.23	.75	.30
23. I can never be as good as other kids	.41	.54	.41	.60	.40	.74	.36
28. It is very hard to remember things	.61	.63	.53	.56	.60	.71	.57
<i>Interpersonal Problems</i> (α = .58)							
5. My family is better off without me	.06	.24	.34	.54	.45	.74	.48
11. I do not want to be with people at all	.22	.42	.42	.47	.41	.74	.36
19. I feel alone all the time	.18	.43	.44	.45	.59	.72	.69
21. I do not have any friends	.20	.45	.41	.47	.36	.74	.32
25. I get into arguments with friends all the time	.06	.24	.08	.62	.19	.76	.13

Note. Subscales 1 and 2 belong to the Emotional Problem Scale (α = .74). The next two belong to the Functional Problems Scale (α = .76). CISSC = Corrected Item-Subscale Correlation; ASSID = Alpha of the Subscale if Item is Deleted; CISC = Corrected Item-Scale Correlation; ASID = Alpha of the Scale if Item is Deleted; CITC = Corrected Item-Total Correlation

Concurrent Validity

As evidence of its concurrent validity (Table 3), Total scores for the full-length CDI-2 were positively related with Total scores on the RADS-2 ( $r = .87, p \leq .001$ ). CDI-2 Total scores correlated with RADS-2 subscales in a range from .63 (Anhedonia/Negative Affect) to .76 (Negative Mood/Dysphoria). Correlations among the RADS-2 Total score and CDI-2 subscales ( $p \leq .001$ ) reflected values from .66

(Negative Mood/Physical Symptoms) and .70 (Negative Self-Esteem and Interpersonal Problems). These associations were of .78 and .75 with the Emotional and the Functional Problems scales, respectively. Significant values from .36 ( $p \leq .01$ ) to .70 ( $p \leq .001$ ) were observed for most correlations (two-tailed) between CDI-2 scales and subscales scores and RADS-2 subscales scores. The only exception found was in the association among the CDI-2 Negative Mood/Physical Symptoms

subscale and the Anhedonia/Negative Affect subscale from the RADS-2 (which was significant only in a one-tailed analysis). Scores on the 12-item CDI-2 correlated .78 with RADS-2 Total scores and .80 with the

RADS-2 short version ( $p \leq .001$ ), while its associations with RADS-2 subscales ranged from .57 (Somatic Complaints) to .72 (Negative Mood/Dysphoria).

TABLE 3.  
Concurrent Validity Coefficients ( $r$ ) for the Spanish CDI-2 Using RADS-2 Scores as Criteria.

CDI-2 Variable	RADS-2 Total	Negative Mood/ Dysphoria	Anhedonia/ Negative Affect	Negative Self- Evaluation	Somatic Complaints
CDI-2 Total Score (Full-length)	.87***	.76***	.62***	.74***	.68***
Emotional Problems	.78***	.70***	.41**	.68***	.75***
Negative Mood/Physical Symptoms	.66***	.62***	.27*	.56***	.70***
Negative Self-Esteem	.70***	.59***	.47***	.63***	.58***
Functional Problems	.75***	.64***	.70***	.64***	.44***
Ineffectiveness	.68***	.58***	.67***	.55***	.36**
Interpersonal Problems	.70***	.58***	.57***	.63***	.48***
CDI-2 Short Form	.78***	.72***	.58***	.65***	.57***

Note. CDI-2 = Children's Depression Inventory-2nd Edition; RADS-2 = Reynolds Adolescent Depression Scale-2nd Edition;  $r$  = Pearson Product-Moment Correlation Coefficient; \* $p \leq .057$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$  (two-tailed).

#### Inter-Correlations of CDI-2 Scores

The correlations of the full-length CDI-2 Total raw score with its subscales were of .76 (Negative Mood/Physical Symptoms), .77 (Negative Self-Esteem), .83 (Ineffectiveness), and .75 (Interpersonal Problems). Its associations with the Emotional and Functional Problems scales were of .89 and .88, respectively. These associations were very similar to those reported by Babakhanyan (2013). The Emotional and the Functional Problems scales correlated .57. Correlations from .51 (Interpersonal Problems) to .91 (Negative Mood/Physical Symptoms) were observed between CDI-2 subscales and the Emotional Problems scale. Correlation coefficients between CDI-2 subscales and the Functional Problems scale reached magnitudes from .44 (Negative Mood/Physical Symptoms) to .96 (Ineffectiveness). Subscales inter-correlations ranged from .40 (Negative Mood/Physical Symptoms and Ineffectiveness) to .61 (Ineffectiveness and Interpersonal Problems), which were also similar to those (.44 to .56) reported by Babakhanyan (2013). Raw scores on the short form correlated .93 with Total Scores on the full-length form. The associations of the former with the Emotional

and Functional Problems scales were of .84 and .81, respectively. Its correlations with CDI-2 subscales were .73 (Negative Mood/Physical Symptoms), .72 (Negative Self-Esteem), .81 (Ineffectiveness), and .58 (Interpersonal Problems). All were significant at  $p \leq .001$  (not shown).

#### DISCUSSION

Our results provided initial evidence in support of the internal consistency and concurrent validity of the full-length form of the Spanish CDI-2 as a measure of depressive symptomatology in Spanish-speaking Latino adolescents from Puerto Rico. Although lower than those reported in the technical manual for the English version, alpha values for its Total score (.84) and its two higher-order scales (.74 and .76) reflected values consistent with our hypotheses. Regarding CDI-2 subscales, three of them obtained internal reliability coefficients in the expected range. Only the Interpersonal Problems subscale ( $\alpha = .58$ ) showed an alpha coefficient below hypothesized levels. It is noteworthy that this is the smallest subscale and that its alpha value would be .62 if deleting item 25. This is not surprising, given that this subscale also had the lowest internal consistency among

CDI-2 subscales in the U.S. total sample (Kovacs & MHS Staff, 2011). Smaller (sub)scales only have a robust alpha if their items are highly inter-correlated (DeVellis, 2016). Despite this situation, alpha coefficients for the Spanish version of the CDI-2, particularly those for lower-order subscales, should be examined in a larger sample, as items with poor performance in small samples may behave differently (i.e., more reliably) with larger samples.

Some findings deserve further attention. First, the average time needed to complete the full-length CDI-2 (5 min with 23 s) was reasonable for a 28-item scale. This average time is particularly salient, considering that, for each CDI-2 item, youths must read three sentences before choosing the one that best described them. That means 84 statements in total, while they only needed to read 30 items (one statement per item) when completing the RADS-2. Second, the mean raw score obtained in the full-length CDI-2 Total score for the whole sample (7.29), as well as scores observed for boys (6.08) and girls (8.46), were similar to scores reported for youth aged 13 to 17 years in the U.S. normative sample (Kovacs & MHS Staff, 2011). The latter were 7.47 for all participants aged 13 to 17 years, 6.83 for boys and 8.11 for girls. The same occurred with the mean raw score observed in our study in the short form (3.29) and the U.S. normative sample (3.48) in the 13-17 years age group. Third, the range of inter-correlations among CDI-2 subscales in our study (.40 to .61), and the correlation among higher-order scales (.57) was somewhat lower than the ones reported for the U.S. total sample (.58 to .69 for subscales and .77 among higher-order scales) in the technical manual (Kovacs & MHS Staff, 2011). This difference might reflect a better distinction in our sample between the aspects assessed by the higher-order scales and the four dimensions proposed in the measure. Additional analyses with larger samples would provide a further test of our findings. For example, one could test the degree to which a different factor structure may better account

for the variance of depressive symptoms if using the CDI-2 Spanish version with adolescents from Puerto Rico. Fourth, the specific pattern of item endorsement (item mean scores) observed in this sample may suggest a tendency to under-report feelings of sadness as compared with other forms of depressed mood (i.e., hopelessness or irritability) or anhedonia. This pattern deserves further attention when conducting studies with larger samples. For instance, our qualitative data suggested that, among options that should be scored as 0 or as 1 on items #1 and #9, some youth found difficult to decide on a response option that best described their emotional state. Finally, it is relevant to acknowledge the remarkable performance if item 19 (*Feels lonely*), which obtained the highest CITC in the short form and the full-length CDI-2, the second highest CISC on the Emotional Problem scale, and the highest CISSC on the Interpersonal Problems subscale. These findings may reflect that having feelings of loneliness could be a more defining feature of depressive mood in adolescents from Puerto Rico than even sadness, irritability or hopelessness. The salient performance of this item on the Spanish CDI-2 with adolescents from our sample resembles similar findings obtained within both a community and a clinical sample of adolescents from Puerto Rico using the first edition of the CDI (Bernal, Rosselló, & Martínez, 1997).

The internal consistency obtained for the full-length Spanish version of the CDI-2 was quite similar to the values reported for other samples of Hispanic youth. For example, other studies reported alpha coefficients of .87 (Scanlon, 2016) and .86 (Zayas et al., 2015) using the full-length CDI-2. However, in both cases most participants completed the English version, and no distinction is made between the English and Spanish version in psychometric analyses. It is important to note that even when an alpha of .92 is reported in the sample of Gulbas et al.'s (2016) study, some characteristics of the sample may explain the somewhat higher magnitude of the

alpha coefficient observed. The sample, which was a subsample from participants described in Zayas et al. (2015), was comprised by cases with extreme CDI-2 scores: those with the highest T scores (most of which would be probable depression cases) and those with the lowest T scores (no depression controls). Those cases were drawn because of the design and purpose of the study. Hence, to the extent to which it is expected that cases with extreme scores in a given scale would have more similar ratings in most items than cases with no extreme scores, an increase in alpha will occur in samples comprised by those cases. Besides, the alpha in that study was increased by the removal of item 8 (*Suicide ideation/intent*) from the analysis (Gulbas et al., 2016), as was also reported by Zayas et al. (2015).

Alternatively, the internal consistency (.68) we obtained for items of the CDI-2 short form has similarities and differences with findings from other studies with Hispanic youths. For instance, the alpha coefficient in our sample was very similar to the one (.69) observed among adolescents from the Ecuadorian Andes, using the Spanish version (Suarez-Lopez et al., 2019). Yet, the internal consistency value obtained in our sample for the short form was lower than those reported in at least two studies with Hispanic youth: one ( $\alpha = .80$ ) conducted using mostly the Spanish version (Marchante-Hoffman, 2018) and one ( $\alpha = .76$  to  $.81$ ) conducted using mostly the English version (Park et al., 2017). Still, it is interesting that our finding was more similar to the only other published study in which the Spanish version of the 12-item CDI-2 was completed by a sample comprised exclusively by Spanish-speaking adolescents, and not by pre-pubertal children and adolescents together. Items for the short form of the CDI-2 were selected based on the administration of the English version to the U.S. normative sample and a clinical sample. The normative sample comprised the same number of children ( $N = 100$ ) at all ages from 7 to 17 years, and 14.5% of Hispanic youths in quotas of 14 or 15 children at each year of age

(Kovacs & MHS Staff, 2011). No separate analyses were reported by race or ethnicity to support that a short scale containing those items will have the same (or a very similar) reliability for all sample subgroups. There is no published evidence that the same 12 items selected for the short form are the “best” version of a brief CDI-2 for both pre-pubertal children and adolescents, as well as for Whites, African American, Asian American, and Hispanics alike. Moreover, the clinical subsample was used to identify individual items with the highest effect size to discriminate between youth with Major Depression ( $n = 108$ ) and matched controls ( $n = 108$ ). This approach provided the initial basis for the development of the short form. However, that sample included only 3.7% of Hispanic youths (Kovacs & MHS Staff, 2011). Still, the correlation between the 12-item and the full-length Spanish-language CDI-2 in our sample (.93) resembled closely the one reported in the U.S. normative sample (.95) for the English-language version.

Although some studies describing samples of Hispanic youth have provided information supporting the validity of the CDI-2 among adolescents, most data have focused in the short form. This was the case in the study by Park et al. (2017) using the English version, as well as with studies by Marchante-Hoffman (2018) and by Suarez-Lopez et al. (2019) using the Spanish version. Alternatively, only Scanlon's (2016) study has provided substantial support for the validity of the full-length CDI-2 among Hispanic youth. However, that support applies only to the English version of the scale when used with children 9 to 13 years. It is not clear whether data provided in Zayas et al. (2015) and Gulbas et al. (2016) support the validity of the English or the Spanish version of the full-length CDI-2, given that the authors did not publish information on how many participants completed the scale in each language nor did they conduct separate analyses for each version. Unfortunately, none of these studies has provided evidence of the validity of the CDI-2 for Hispanics using as validity criterion

another self-report rating scale to assess depressive symptomatology. To date, in the only study in which another self-report rating scale for depression was used, along with the CDI-2, with a sample that had at least the same proportion of Hispanics as the CDI-2 normative sample (14.5%), the authors did not report separate analysis for Hispanics. In addition, the study (which had a Hispanic enrollment of 22.6%) was aimed to establish the validity of the other depression scale using the CDI-2 as criterion and not the other way around (Babakhanyan, 2013). Our study is the first to provide such evidence and our preliminary results are solid in supporting the concurrent validity of the full-length CDI-2 Total scores and its scales and subscales scores, as well as of the short form. Finally, the correlation we found among the CDI-2 and the RADS-2 is similar to those reported by Figueras-Masip et al. (2008) between the original CDI and the RADS (.73 to .81) in a non-clinical sample of Spaniard adolescents and to those reported between these scales in the RADS-2 manual (Reynolds, 2002).

This study has several limitations. Our sample size is small, as expected in a pilot study, which precludes analysis of psychometric properties within subgroups. Still, the sample used to obtain this preliminary data complied with criteria suggested by Yurdugül (2008) to establish reliable estimation of alpha with small sample sizes; that is, that the eigenvalue of the first component in a Principal Component Analysis must be  $> 6.00$  (obtained value = 6.07). The convenience nature of our sample is also a limitation. Further studies should examine the scale's properties using larger samples and sampling methods that increase the ability to generalize results. Similar to the other available studies conducted with Hispanic samples, our pilot study did not assess the temporal reliability of the CDI-2. Future research should also examine CDI-2 sensitivity to changes after psychosocial interventions, and its reliability and validity within clinical samples of Hispanic youth.

Our pilot study constitutes the first examination of the internal consistency of the full-length CDI-2 among Hispanic youth, considering not only its Total score, but also its scales and subscales scores, using either the English or the Spanish-language version. It is also the first study to assess the full-length scale's psychometric properties using only the Spanish version and within a sample comprised exclusively by Hispanic youths, particularly adolescents. Previous studies reporting psychometric information about the CDI-2 with Hispanic youths had been limited to using the 12-item version, either in English (Park et al., 2017) or Spanish (Marchante-Hoffman, 2018; Suarez-Lopez et al., 2019) or mostly the full-length English version (Gulbas et al., 2016; Scanlon, 2016; Zayas et al., 2015). Besides, the only studies that have reported psychometric information for this scale in a sample comprised exclusively by Hispanic adolescents used the 12-item form, either in English (Park et al., 2017) or Spanish (Suarez-Lopez et al., 2019). Although based on a small sample size, our study provides a preliminary report on the internal consistency of the full-length Spanish version and offers important initial evidence of the concurrent validity of the measure, as well as evidence of both the reliability and validity of the subset of 12 items included in the CDI-2 short form.

In this article, we provided initial evidence on the CDI-2 applicability with Spanish-speaking Hispanic adolescents from Puerto Rico and integrated the findings in the context of the general literature on the use of this measure with Hispanic youths. We are currently in the process of recruiting a larger sample of Hispanic adolescents to conduct a more definite assessment of the internal consistency and concurrent validity, as well as test-retest reliability (with a 2-week interval), of this measure. Initial findings of that larger scale study confirm the results of this pilot study. Such study will allow more complex psychometric analyses with subgroups defined by sex and age, among other variables. In sum, data from our pilot study suggests that the Spanish CDI-2 might be as

understandable, rapidly administered, reliable, and valid as the original CDI when used to measure depressive symptoms among Hispanic adolescents from Puerto Rico. Further studies should examine its psychometric properties with pre-pubertal children from the Island.

**Funding:** This work was possible thanks to funds granted by the President of the University of Puerto Rico to the Institute for Psychological Research, and to funds granted to the first author by the National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health, under award number R03DK092547.

**Declaration of Conflicting Interests:** The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Approval from the Institutional Review Board for Human Research:** The Institutional Review Board at the University of Puerto Rico, Río Piedras Campus, approved the protocol of this study (#1213-209).

**Informed Consent/Assent:** Written informed consent/assent was obtained from participants and their primary caregivers.

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