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BRIEF REPORT

Bicultural Identity in Childhood: Preliminary Validation of the Bicultural Identity Integration Scale for Children (BIIS-C)

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Objective: In the present study, we adapted and validated the Bicultural Identity Integration Scale for Children (BIIS-C). ***Method:*** 259 bicultural children (119 males, 140 females; M_{age} = 11.07, SD = 1.24) were provided with a questionnaire. Based on adult versions of the scale, we tested the factorial structure of a set of 11 nonreversed items tapping into harmony (vs. conflict; six items) and blendedness (vs. compartmentalization; five items) dimensions. ***Results:*** A two-factor model was compared with a one-factor model. In line with research on adults, results showed that the two-factor model (with nine items) fitted the data better than the one-factor model. The two dimensions yielded reliable scores and were correlated in the expected direction with personality variables, acculturation attitudes, and perceived discrimination. ***Conclusions:*** The BIIS-C provides valid and reliable scores for research on biculturalism in childhood.

Public Significance Statement
Bicultural identity integration (BII) is important for biculturals' general wellbeing. Thus, research in this area is needed. Yet, studies on BII in children are scarce mainly because of lack of a specific measure for children. This study aims to fill this gap by providing a validation of a BII scale for children.

Keywords: bicultural identity integration (BII), biculturalism, personality, perceived discrimination, children

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Immigration worldwide has reached a peak over the last five decades (International Organization for Migration, 2019). Now more than ever interethnic contact is a daily reality (Pew Research Center, 2017). Consequently, an increasing number of individuals are being exposed to more than one culture. This is true for first generation individuals who migrated from another country but also for individuals born in a country and raised with more than one culture. These individuals who have experienced more than one culture are defined as biculturals (Benet-Martínez, 2012; Nguyen & Benet-Martínez, 2007, 2010) and may differ in their levels of psychological and sociocultural adjustment (Nguyen & Benet-Martínez, 2013).

Biculturalism reflects the acculturation strategy of integration (see Berry & Sam, 1997) which implies both the acceptance of the host

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society's culture and maintenance of the heritage culture (Berry & Sam, 1997; Huynh et al., 2011). Research has shown that biculturalism expresses itself in different variants and it does not necessarily represent a unified construct (Schwartz & Zamboanga, 2008). This has caught the attention of scholars, resulting in a number of different models of biculturalism (see LaFromboise et al., 1993; Phinney & Devich-Navarro, 1997). Benet-Martínez et al. (2002) proposed the construct of Bicultural Identity Integration (BII), an individual difference variable that reflects bicultural individuals' perceptions of how their dual identities are related to each other. BII consists of two different dimensions: (a) cultural *blendedness* versus *compartmentalization* which refers to a cognitive appraisal of cultural identities as overlapping or dissociated; (b) cultural *harmony* versus *conflict* which reflects an affective evaluation of cultural identities as compatible or discordant (Benet-Martínez & Haritatos, 2005; Szabó et al., 2020). Recent work has discussed BII in the context of the transformative theory of biculturalism (West et al., 2017; see also Meca et al., 2019). This comprehensive account posits that biculturals' characteristics and experiences are not only directly influenced by each of their cultures, but also by the processes bicuturals use to negotiate between them. The BII framework fits this transformative account because it assumes that the differences in how biculturals integrate the two cultures affect their responses to the cultural context in which they live.

Regarding BII and its psychological correlates, results show that individuals higher on BII show greater psychological adjustment (Chen et al., 2013), less depression and anxiety symptoms, and less perceived stress and cortisol reactivity (harmony dimension; Tikhonov et al., 2019; Yim et al., 2019).

Early studies assessed BII through a vignette-like instrument with a single item called the Bicultural Identity Integration Scale-Pilot Version (BIIS-P; Benet-Martínez et al., 2002, 2006). However, this scale confounded experiences of cultural blendedness and harmony. To overcome this limitation, Benet-Martínez and Haritatos (2005) developed the Bicultural Identity Integration Scale-Version 1 (BIIS-1), an eight-item scale which separately tapped the degree of blendedness versus compartmentalization and harmony versus conflict. Yet, this scale sometimes showed medium-low reliability scores for the two components. Thus, the Bicultural Identity Integration Scale-Version 2 (BIIS-2) was developed (Huynh, 2009; Huynh et al., 2018). The BIIS-2 has shown evidence of score reliability and structure invariance across different ethnic and generation groups. This measure covers a wider range of aspects related to each dimension while still maintaining its relatively brief format presentation.

Although a bulk of research has examined the correlates of BII in adults, studies on BII in children are scant. The research is limited, in part, because of a lack of psychometrically validated instruments to assess BII in childhood. To date there has been only one study with children (Ni et al., 2016) and a few with adolescents (e.g., Ferrari et al., 2015, 2019; Schwartz et al., 2015), all using the BIIS-1 without any prior and proper scale validation. Investigating BII in childhood is important since identity formation is a process that covers the full lifespan (Erikson, 1968) and is remarkably influenced by one's cultural background.

While bicultural identity among children has been little investigated, considerable research has been conducted on the development of ethnic-racial identity (ERI; Vedder & Phinney, 2014). According to Phinney's (1989) model, children move from different stages of ethnic identity development, from childhood to late adolescence. The assumption that the content of ERI is gradually formed through socialization, maturation processes, and personal experiences is also a common assumption of later developmental models (Verkuyten, 2016). Although adolescence is consensually regarded as a critical period for the development of a coherent sense of self that integrates multiple identities (Erikson, 1968; Syed, 2010), it is generally acknowledged that the cognitive abilities underlying the development of ERI begin to emerge during middle-late childhood (6–14 years; Quintana, 1998; Williams et al., 2020). Identity development is more demanding for bicultural youth compared to their mainstream peers (Erentaitė et al., 2018) because they are expected to explore, integrate, and negotiate their different cultural identities into a unified sense of the self. Moving toward a coherent sense of identity is pivotal for healthy functioning within a society (Erikson, 1950). Thus, investigating bicultural identity integration during middle-late childhood becomes critical.

To date, no scale has been specifically validated to assess BII with children. This is problematic because empirical investigations on BII development in middle-late childhood require a psychometrically sound measure. Validating a scale that assesses BII in children may ultimately allow researchers to accurately and confidently study children's integration of bicultural identities.

The Present Study

The aim of the present study was to validate a BII scale for children (BIIS-C). To this end, we adapted the adult versions of the BII scale (BIIS-1 and BIIS-2) and tested the psychometric properties of this adapted instrument with a sample of bicultural children. Adult versions of the BII scale (BIIS-1 and BIIS-2), assess two distinct dimensions: harmony (vs. conflict) and blendedness (vs. compartmentalization). For each dimension, we used a set of nonreverse items: six for the harmony (vs. conflict) and five for the blendedness (vs. compartmentalization) dimension. The factorial structure of the scale and its convergent and discriminant validity were examined through confirmatory factor analysis (CFA). To this end we administered the BIIS-C scale along with measures of personality dimensions (neuroticism and openness, Big Five model), acculturation attitudes (integration and assimilation), and acculturation stressors (perceived discrimination) which have been found to be associated with BII dimensions (see Huynh et al., 2018 for specific associations using the BIIS-2 scale, see also Benet-Martínez & Haritatos, 2005). Consistent with previous studies on adults, we hypothesized a bi-factorial structure, with one factor for harmony (vs. conflict) and one factor for blendedness (vs. compartmentalization). We expected the two dimensions to be distinct. The two-factor model was tested against a one-factor model, to ascertain which of the two models would fit the data best. As for convergent and discriminant validity, consistent with empirical evidence reported above, we hypothesized that harmony (vs. conflict) would be significantly related to lower neuroticism, assimilationist attitudes, and perceived discrimination, while blendedness (vs. compartmentalization) would be significantly associated with higher openness to experience, greater integrationist, and lower assimilationist attitudes.

Method

Participants

Two-hundred and sixty-six bicultural children participated in the study. Seven were excluded because they did not identify as bicultural, leaving $N = 259$ (119 males, 140 females; $M_{age} = 11.07$, $SD = 1.24$; range = 9–14). Children attended grades from fourth to seventh in 14 schools (28 classes) located in Northern Italy. Fifty different countries were reported as children's or parents' country of birth; 15.1% ($n = 39$) of participants had one both parents born in India, 12.4% ($n = 32$) in Morocco, 8.5% ($n = 22$) in Albania. Children were mostly second generation (76.8%, $n = 199$), in line with national trends (Santangati & Colussi, 2020); first generation children on average had been living in Italy for 6.55 years ($SD = 3.73$).

Procedure

The present study was conducted in parallel with another study on intergroup contact that involved nonbicultural children. The research received ethical approval from the Ethics Committee at the Department of Human Sciences (University of Verona). Participation was on a voluntary basis. Parents (or the legal guardians) were asked to sign an informed consent form and to indicate their as well as their children's country of birth. Children born outside of Italy and/or having one or both parents born in a country other than Italy were provided with the target questionnaire. Children who did not identify as bicultural were given a different questionnaire. The questionnaire was completed individually during classes. Participants were explained the aims of the study and asked their consent to participate (for further details see Supplemental Materials).

Measures

Responses to all items were given on a 5-point scale (1 = *not at all*, 2 = *only a little*, 3 = *to some extent*, 4 = *rather much*, 5 = *very much*). For all measures except personality (see below), item translation from English and adaptation for the Italian child sample was done following the back-translation procedure and adapting the wording of items in accordance with the age of our sample and with acknowledged standards (e.g., using short and simple sentences, avoid abstract terms; van Widenfelt et al., 2005). Items were translated and adapted by a team including two social psychologists (one of which is a native English speaker) and one educationist (with previous experience as a primary school teacher).

Bicultural Identity Integration Scale for Children

The scale consists of 11 items, six for the harmony (vs. conflict) dimension and five for the blendedness (vs. compartmentalization) dimension. Moving from the assumption that nonreverse items would be easier to understand for children than reverse items (Ebesutani et al., 2012; see also Brown, 2003), we used a set of nonreverse items based on adult versions of BII scales (Benet-Martínez & Haritatos, 2005; Huynh et al., 2018; see Table 2). Higher scores indicated higher levels of conflict and blendedness, respectively. Harmony items were reverse scored.

Personality

We used the neuroticism and openness to experience subscales (13 items each) of the Big Five Questionnaire child version developed and validated by Barbaranelli et al. (2003) with a sample of Italian children. Higher scores indicated higher levels of neuroticism and openness to experience.

Acculturation Attitudes

Two subscales of the acculturation questionnaire by Berry et al. (1989) were used to assess integrationist and assimilationist attitudes. Each subscale contains five items measuring acculturation orientations across five domains: cultural traditions, social activities, friends, marriage, and language. Berry et al. (1989) tested the scale reliability and concurrent validity; however, as far as we know, the factorial structure of the scale has not been tested (but see Schmitz & Berry, 2011, for the validation of the German version). Higher scores indicated greater assimilationist and integrationist attitudes.

Perceived Discrimination

We used the nine-item Everyday Discrimination Scale (EDS; Williams et al., 1997). The scale has been validated with a sample of adolescents (Clark et al., 2004) as well as with adults (Krieger et al., 2005). Participants indicated to what extent they experienced various forms of day-to-day discrimination due to their foreign background. Higher scores indicated greater perceptions of discrimination.

Table 1
Goodness-of-Fit Statistics for CFAs Applied to the BIIS-C (ML Estimation Method; N = 259)

Model	Goodness-of-fit indices						
	χ^2	*df*	*p*	χ^2/df	CFI	RMSEA	SRMR
Two-factor (11 items)	122.49	43	.00	2.85	.92	.09	.09
Two-factor (9 items)	49.84	26	.003	1.92	.97	.06	.06
One-factor (9 items)	364.41	27	.00	13.50	.50	.24	.19
Two-factor (9 items; correlation constrained to 1)	140.93	27	.00	5.22	.88	.11	.26

Note. CFA = confirmatory factor analysis; BIIS-C = Bicultural Identity Integration Scale for Children; ML = maximum likelihood; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual.

Table 2
Items of the BIIS-C and Loadings for the Two-Factor Model With 11 and 9 Items (N = 259)

Item		Two-factor model (11 items)			
Harmony (vs. conflict)	Blendedness (vs. comparti-mentalization)	Harmony (vs. conflict)	Blendedness (vs. comparti-mentalization)	Two-factor model (9 items)	
1.	(a) I feel torn between _____ and American cultures. (b) I feel divided between the _____ culture and the Italian culture. [Mi sento diviso tra la cultura _____e la cultura italiana].	.66***	—	.65***	—
2.	(a) I feel that my _____ and American cultures are incompatible. (b) I feel that the _____ culture and the Italian culture are in opposition to each other. [Sento che la cultura _____e la cultura italiana sono opposte tra loro.]	.42***	—	.46***	—
3.	(a) Being bicultural means having two cultural forces pulling on me at the same time. (b) Being bicultural is like having two cultural forces pulling on me at the same time. [Essere biculturale è come essere tirato da due forze culturali allo stesso tempo.]	.61***	—	.56***	—
4.	(a) I feel conflicted between the American and _____ ways of doing things. (b) I feel conflicted between the Italian and _____ ways of doing things. [Mi sento in conflitto tra i modi di fare italiani e quelli _____.]	.52***	—	.56***	—
5.	(a) I feel like someone moving between two cultures. (b) I feel like a person moving between two cultures. [Mi sento come una persona che si muove tra due culture.]	.59***	—	—	—
6.	(a) I feel caught between the _____ and American cultures. (b) I feel caught between the _____ and Italian culture. [Mi sento incastrato tra la cultura _____ e la cultura italiana.]	.69***	—	.70***	—
7.	(a) I feel _____ and American at the same time. (b) I feel _____ and Italian at the same time. [Mi sento _____e italiano allo stesso tempo.]	—	.67***	—	.64***
8.	(a) I relate better to a combined _____-American culture than to _____ or American culture alone. (b) I feel more Italian-_____ than only _____ or only Italian. [Mi sento più italo_____piuttosto che solo _____ o solo italiano.]	—	.65***	—	.64***
9.	(a) I cannot ignore the _____ or American side of me. (b) I cannot ignore the _____or Italian side of me. [Non posso ignorare la parte _____ o la parte italiana di me.]	—	.36***	—	—
10.	(a) I feel _____-American. (b) I feel Italian-_____. [Mi sento italo-_____.]	—	.91***	—	.94***
11.	(a) I feel part of a combined culture. (b) I feel part of a culture made out of two unified cultures. [Mi sento parte di una cultura fatta di due culture unite tra loro].	—	.56***	—	.54***

Note. Items marked with (a) refer to the original items from the BIIS-2 (Huynh et al., 2018) while items marked with (b) refer to the adapted English and Italian versions of the items. Item translation from English and adaptation for the Italian child sample was done following the back-translation procedure and adapting the wording of items in accordance with the age of our sample and with acknowledged standards (e.g., using short and simple sentences, avoid abstract terms; van Widenfelt et al., 2005). Items were translated and adapted by a team including two social psychologists (one of which is a native English speaker) and one educationist (with previous experience as a primary school teacher). Items of the harmony (vs. conflict) dimension were reverse scored. BIIS-C = Bicultural Identity Integration Scale for Children
*** $p < .001$.

Results

Analytic Strategy

Missing values represented 2.1% of total responses. Little's MCAR test showed that missing data were completely at random, $\chi^2(3536) = 3{,}600.30$, $p = .221$. We replaced missing data using the EM algorithm (Graham, 2009). The factorial structure of the BIIS-C (two-factor model) was tested with CFA, using the Maximum Likelihood (ML) and the Robust Maximum Likelihood (RLM; see Supplemental Materials) estimation methods (LISREL 8.80; Jöreskog & Sörbom, 2006). Single items were used as manifest indicators. Next, we compared the BIIS-C two-factor solution with: (a) a one-factor solution; (b) a two-factor model in which the correlation between the two factors was fixed to 1. CFA was also applied to the other scales (see Supplemental Materials).

McDonald's (1999) omega was computed to assess scale reliability using Hayes and Coutts' (2020) SPSS macro.

To test convergent and discriminant validity, we conducted a CFA including seven latent variables (BIIS-C dimensions, personality dimensions, acculturation attitudes, perceived discrimination). To maintain an adequate ratio of cases to parameters, we used parcels instead of single items (Little et al., 2002). Item aggregation has several advantages. Compared to separated items, parcels have higher reliability, greater communality, higher ratio of common-to-unique factor variance, lower likelihood of distributional violations, tighter and more equal intervals. Models with parcels have fewer parameter estimates, lower indicator-to-sample size ratio, lower likelihood of correlated residuals, and fewer sources of sampling error (Little et al., 2013).

Model goodness-of-fit was evaluated using the chi-square statistic (χ^2), the χ^2/df ratio, the comparative fit index (CFI), the root-mean-square error of approximation (RMSEA), and the standardized root-mean-square residual (SRMR). The model fit is satisfactory with a χ^2/df ratio smaller than 3 (Kline, 2010), a CFI value $\geq .95$, an RMSEA value $\leq .06$, an SRMR $\leq .08$ (Hu & Bentler, 1999). To compare the BIIS-C two-factor solution with the one-factor solution, we used the Akaike Information Criterion (AIC; Akaike, 1974), for which smaller values suggest a better model fit. For the comparison between the unconstrained and the constrained two-factor solution, the chi-square difference test was used (Satorra & Bentler, 2001).

Finally, we compared first- versus second-generation and males versus females on harmony and blendedness scores using *t*-tests to analyze whether mean scores remained constant across different subgroups.

Factorial Structure of BIIS-C

Goodness-of-fit statistics are reported in Table 1. The two-factor CFA including 11 items (six for harmony and five for blendedness) showed a poor fit. The highest modification index (MI = 24.08) suggested that one item of the conflict dimension (Item 5, see Table 2) significantly loaded also on the blendedness dimension. Moreover, one item for the blendedness dimension (Item 9, see Table 2) had a completely standardized loading lower than .40. We therefore dropped both items and tested a two-factor model with nine items (five for harmony and four for blendedness). This model showed a good fit. Factor loadings were all significant and higher than .40 (see Table 2). The two dimensions were uncorrelated ($\phi = -.01$, *ns*). The two-factor model with nine items was compared with a one-factor model in which all the items loaded on a single latent construct. The one-factor model poorly fitted the data. The AIC values suggested a better fit of the two-factor model (AIC = 88.84) as compared to the one-factor model (AIC = 460.07). Similarly, the fit of the constrained two-factor solution was unsatisfactory. The chi-square difference test confirmed that the two-factor model was statistically superior: $\chi^2\Delta(1) = 91.59$, $p < .001$.

Table 3
Reliabilities and Descriptive Statistics for the Study Variables (N = 259)

Variable	Ω	*M*	*SD*
BIIS-C harmony	.72	3.78	0.84
BIIS-C blendedness	.79	3.29	1.08
BF neuroticism	.84	2.69	0.76
BF openness to experience	.80	3.38	0.64
Assimilation	.75	2.08	0.87
Integration	.59	3.67	0.76
Perceived discrimination	.80	1.72	0.70

Note. BIIS-C = Bicultural Identity Integration Scale for Children; BF = Big Five scale.

Reliabilities and Descriptives

Reliabilities, mean scores, and standard deviations for the study variables are reported in Table 3. Reliability was relatively low for integration and satisfactory for all the other scales.

Convergent and Discriminant Validity

Fit indices were excellent: $\chi^2(131) = 143.77$, $p = .21$; $\chi^2/df = 1.10$; CFI = 1.00; SRMR = .04; RMSEA = .02. As expected, harmony (vs. conflict) was moderately related to neuroticism, assimilation, and perceived discrimination, while blendedness (vs. compartimentalization) showed a weak (though significant) association with openness to experience, and a robust association with integration (see Table 4).

Comparing First- Versus Second-Generation and Females Versus Males

Comparisons with independent *t*-tests (see Table 5) revealed that differences between first- and second-generation on both BII

Table 4
Correlations of BIIS-C Dimensions With Other Variables (N = 259)

Variable	Harmony (vs. conflict)	Blendedness (vs. compartimentalization)
BF neuroticism	−.34***	−.13
BF openness to experience	.07	.17*
Assimilation	−.38***	−.08
Integration	−.11	.60***
Perceived discrimination	−.50***	−.09

Note. BIIS-C = Bicultural Identity Integration Scale for Children; BF = Big Five scale.
* $p < .05$. *** $p < .001$.

Table 5
Mean Scores of BIIS-C Across Generation Group and Gender (N = 259)

	Generation group					Gender				
BIIS-C	First (n = 60) M (SD)	Second (n = 199) M (SD)	t(257)	p	d	Males (n = 119) M (SD)	Females (n = 140) M (SD)	t(257)	p	d
Harmony (vs. conflict)	3.80 (0.80)	3.78 (0.86)	0.25	.81	0.04	3.71 (0.84)	3.84 (0.85)	1.22	.22	0.15
Blendedness (vs. compartimentalization)	3.16 (1.08)	3.32 (1.08)	1.05	.30	0.15	3.45 (1.06)	3.15 (1.08)	2.28	.02	0.28

Note. BIIS-C = Bicultural Identity Integration Scale for Children.

dimensions were at best marginal. The difference between male and female participants on harmony was small, while there was a moderate gender difference on blendedness, with males showing higher scores than females.

Discussion

In the present study, we adapted the BII scale and tested its psychometric properties with a sample of children. Despite the growing body of research on BII in adults, there has been a lack of studies with children. This is partly due to the absence of a scale specifically validated with children samples. The present study attempted to fill this gap. Using CFA, we found evidence for a two-factor model with nine items, five for the harmony (vs. conflict) and four for the blendedness (vs. compartmentalization) dimension. Moreover, we showed that the two-factor model describes the BII construct better than a single factor. These findings are in line with parallel studies with adults (Huynh et al., 2018) and provide evidence for a bi-dimensional conceptualization of bicultural identity (Benet-Martínez & Haritatos, 2005) that distinguishes between perceived conflict and distance.

Our findings also show that the two subscales assessed with children yielded reliable scores and were differently associated with other constructs. Consistent with research on adult samples, children higher in bicultural identity harmony (vs. conflict) showed significantly less neuroticism, assimilationist attitudes, and perceived discrimination, while children higher on bicultural identity blendedness (vs. compartimentalization) showed higher openness to experience and integrationist attitudes. Contrary to expectations based on findings in adult samples (see Huynh et al., 2018), blendedness (vs. compartmentalization) was not related to lower preference for assimilation in our sample of children, even though it was associated with preference for integration. This result indicates that BII dimensions in bicultural children might show both similarities and differences compared to bicultural adults in terms of correlates and suggests that a broader set of related constructs should be considered in future studies to gather a more complete picture of bicultural identity in children.

Constraints on Generality

It is important to note some limitations of the present study. First, we were unable to test structural invariance across different ethnic groups because of the highly heterogeneous composition of our sample. However, both the factorial structure of the BIIS-C and associations with other constructs closely resemble those found by Huynh et al. (2018) that were invariant across two ethnic groups. Nevertheless, this issue should be further addressed in future research. Second, we did not test invariance across first versus second generation, because of the small size of the first-generation subsample. However, mean score comparisons revealed only small differences between the two groups. Third, the cross-sectional design of this study did not allow us to test for longitudinal invariance, which is critical for drawing valid inferences about developmental changes.

In conclusion, the present study demonstrates that the BIIS-C generates valid and reliable scores. Researchers may confidently and accurately use this measure to assess bicultural identity in childhood and to examine its psychological antecedents and consequences.

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