

# Technical Appendix

## Provider Voice in Home-Based Child Care Networks Scale (PV-HBCCN)

### Sample Characteristics

The PV-HBCCN was piloted with providers affiliated with 16 HBCCNs across two research projects. A total of 113 providers completed online surveys that included the PV-HBCCN; 6 providers had missing scale items and were excluded from these analyses. The scale was distributed in English, Spanish, and Mandarin, depending on provider language preferences at each HBCCN. Between 1 and 17 providers at each HBCCN completed the survey.

**Table 1 | Descriptive statistics of the sample (N=107)**

	N	Percent /M (SD) Range
<b>Gender (n=99)</b>		
Male	4	4.04%
Female	95	95.96%
<b>Provider race and ethnicity (n=96)</b>		
Black or African American	36	37.50%
Latina/o or Hispanic Origin	26	27.08%
White	25	26.04%
Asian or Pacific Islander	13	13.54%
American Indian, Alaska Native or Indigenous	3	3.13%
<b>Age (approximate, n=88)</b>		<b>49.56 (10.30) 30-73</b>
Younger than 40 years old	16	18.18%
40 to 49 years old	31	35.23%
50 to 59 years old	24	27.27%
60 years old or older	17	19.32%
<b>Education level (n=97)</b>		
High school diploma or GED	29	29.90%
Some college	24	24.74%
Associate's degree	16	16.49%
Bachelor's or graduate degree	28	28.87%

Table 1, continued

	N	Percent /M (SD) Range
<b>Licensed or registered to provide care (n=105)</b>		
Yes ( Family Child Care)	91	86.67%
No (Family, Friend, and Neighbor Care)	14	13.33%
<b>Survey language</b>		
English	84	78.50%
Spanish	15	14.02%
Mandarin	8	7.48%
<b>Research Project</b>		
Project 1	57	53.27%
Project 2	50	46.73%
<b>Number of participants from network</b>		<b>5.10 (4.78) 1-17</b>

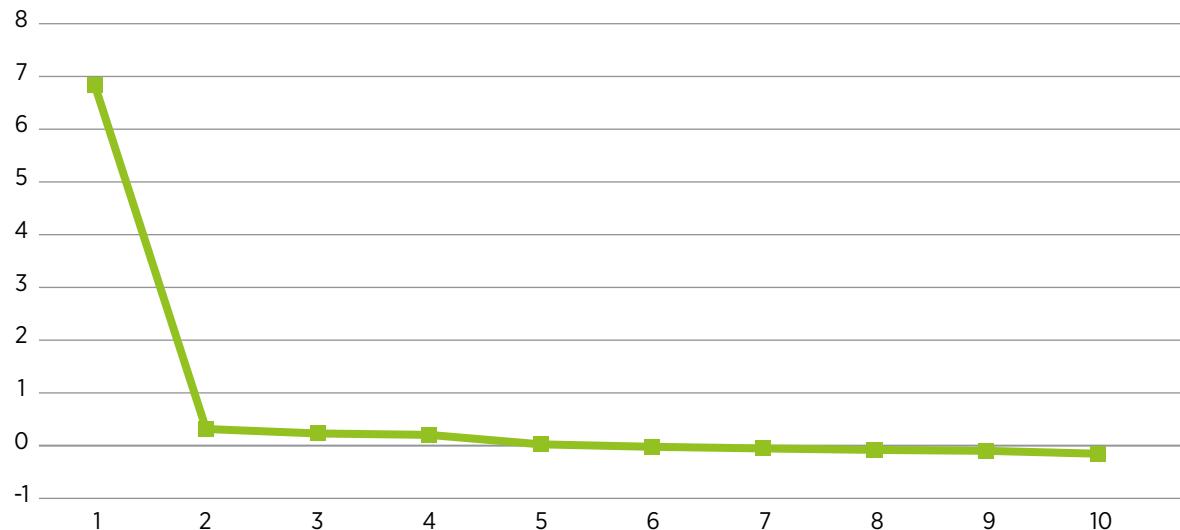
## Construct Validity—Exploratory Factor Analysis

The factor analysis showed a single-factor structure for the PV-HBCCN (Figure 1).

All 10 items had factor loadings > 0.70 (Table 2).

**Figure 1 | Factor Analysis Scree Plot**

Scree Plot of Eigenvalues



**Table 2 | PV-HBCCN Item Factor Loadings**

Item	M	SD	Range	Factor Loading
PV-HBCCN (mean)	4.02	0.83	1-5	
The network respects my child care and early education work	4.11	1.04	1-5	0.8718
The network recognizes my strengths	4.01	0.93	1-5	0.8932
I feel that my voice is heard	3.88	1.06	1-5	0.9057
The network listens to my concerns about the type of support I need	3.93	1.02	1-5	0.8664
The network gives me a chance to ask questions	4.19	0.90	1-5	0.8681
The network asks me for my ideas about how to improve the network	4.00	1.03	1-5	0.8115
I feel comfortable sharing my opinion about how the network should be run (including what types of supports should be offered)	3.93	1.02	1-5	0.7066
My network changes supports to meet my needs	3.75	0.96	1-5	0.8101
My network schedules meetings at times FCC educators can come	4.12	0.91	1-5	0.7141
My network believes family child care programs can offer high quality care and education	4.25	0.98	1-5	0.7963

### Internal Consistency—Cronbach's $\alpha$

The PV-HBCCN had acceptable internal consistency overall and across subgroups (Table 3), indicating that the items measure a single construct and that the construct remained reliable for different subgroups.<sup>1</sup> The scale was significantly skewed in a positive direction across the sample (Figure 2).

**Table 3 | PV-HBCCN Internal Consistency Across Scale and Within Subgroups**

	N Range	Cronbach's $\alpha$ Range	Interitem Covariance Range
PV-HBCCN	107	.95	0.65
Race/ethnicity <sup>a</sup>	14-36	.94-.96	0.36-0.83
Education	17-28	.90-.98	0.35-0.94
Age (categorical)	16-31	.92-.98	0.28-1.13
Licensing type	14-97	.92-.96	0.32-0.70
Language	8-17	.95-.97	0.30-0.83
Network <sup>b</sup>	8-14	.80-.96	0.11-0.90

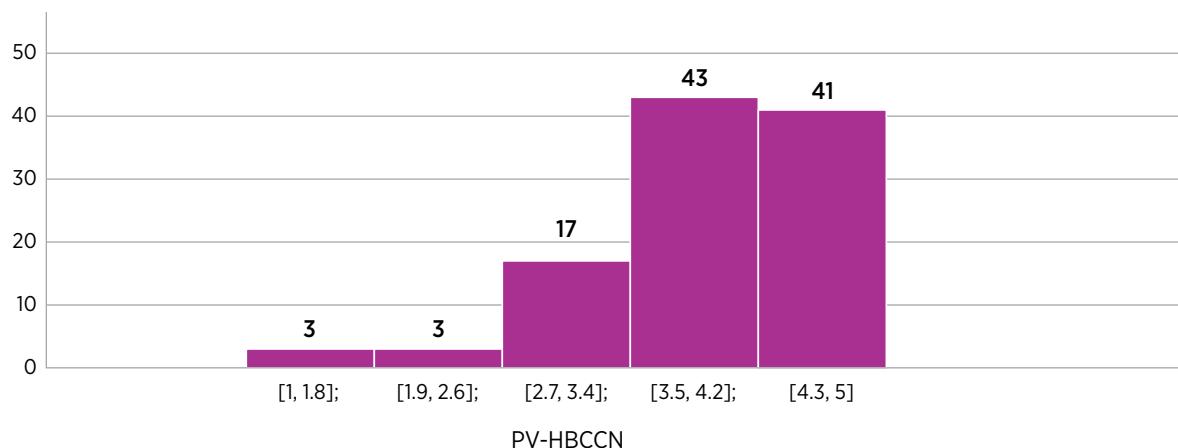
a Cronbach's alpha was not calculated for American Indian, Alaska Native, or Indigenous subgroup because of small sample size.

b Cronbach's alpha was only calculated for the six networks with eight or more providers.

1 An area for future testing on this tool would be to investigate test-retest reliability.

**Figure 2 | PV-HBCCN Histogram**

Number of providers



## Discriminant and Predictive Validity—Pearson’s Correlations

Pearson correlation coefficients were calculated using a subsample of providers from one of the research projects to assess predictive and discriminant validity. The PV-HBCCN is correlated with various measures of network satisfaction that theoretically would have a positive relationship with positive perception of provider voice. These measures include positive perceptions of HBCCN support (Table 4), the usefulness of HBCCN supports (Table 5), and positive relationships with HBCCN staff (Table 6).

Additional Pearson’s correlations showed that the PV-HBCCN is not correlated with measures that are not theorized to have a direct relationship with provider voice. As expected, the PV-HBCCN was not correlated with measures of general job stress or teaching efficacy (Table 7).

**Table 4 | PV-HBCCN Predictive Validity—Correlation With Measures of Perceptions of Network Support**

Item	N	Correlation Coefficient	Sig. (2-Tailed)
A network staff member is available when I have a problem or question	39	.758	<.001
Talking with network staff helps me with difficult situations	39	.768	<.001
I feel comfortable sharing difficult situations with network staff	39	.842	<.001
Working with the network has made me feel more capable	39	.762	<.001
The network understands my concerns	39	.814	<.001
I feel I can pick up the phone and call network staff	39	.835	<.001
The network provides me with good information about how to take care of children	39	.739	<.001
The network provides me with good information about how to work with parents and families	39	.656	<.001

Source: Items from the Relationship-Based Support for Home-Based Child Care Assessment Tool (RBS-HBCC). Bromer, J., Ragonese-Barnes, M., Korfsmacher, J., & Kim, K. (2020). *The Relationship-Based Support for Home-Based Child Care Assessment Tool Manual*. Erikson Institute.

**Table 5 | PV-HBCCN Predictive Validity—Correlation With Measures of Usefulness of Network Supports**

<i>I believe a network has ...</i>	<b>N</b>	<b>Correlation Coefficient</b>	<b>Sig. (2-Tailed)</b>
Made me feel less on my own	39	.478	.002
Made me feel like a professional	39	.702	<.001
Helped me improve the quality of care I offer children and families	39	.597	<.001
Helped me with my child care business	39	.741	<.001
Helped me with enrollment of families	39	.611	<.001
Helped me meet other providers in my community	39	.203	.216
Advanced my education and professional development	39	.523	.001

**Table 6 | PV-HBCCN Predictive Validity—Correlation with Measures of Provider Relationships with Network Staff**

<i>My network coordinator is ...</i>	<b>N</b>	<b>Correlation Coefficient</b>	<b>Sig. (2-Tailed)</b>
Rude	39	-.436	.005
Judgmental	38	-.431	.007
Unaware of my circumstances	37	-.510	.001
Unfamiliar with family child care	39	-.474	.002
Caring	39	.369	.021
Dependable	39	.341	.034
Trustworthy	39	.364	.023
Familiar with my family child care home	39	.313	.052
Knowledgeable about family child care	39	.443	.005
Respectful of my family's cultural and religious beliefs	39	.454	.004
Has my best interests in mind	39	.382	.016

Note: Items are from the Relationship-Based Support for Home-Based Child Care Assessment Tool (RBS-HBCC). Bromer, J., Ragonese-Barnes, M., Korfsmacher, J., & Kim, K. (2020). *The Relationship-Based Support for Home-Based Child Care Assessment Tool manual*. Erikson Institute.

**Table 7 | PV-HBCCN Discriminant Validity—Correlation With Measures of Job Stress and Teaching Efficacy**

	N	Correlation Coefficient	P-Value
Job stress <sup>a</sup>	39	-.027	.872
Teaching self-efficacy <sup>b</sup>	38	-.205	.218

a Early Childhood Teacher Experiences Scale. Fantuzzo, J., Perlman, S., Sproul, F., Minney, A., Perry, M. A., & Li, F. (2012). *Making visible teacher reports of their teaching experiences: The Early Childhood Teacher Experiences Scale*. Psychology in the Schools, 49,194–205.

b Teacher Opinion Survey. Geller, S., & Lynch, K. (1999). *Teacher opinion survey*. Commonwealth University Intellectual Property Foundation and Wingspan, LLC.

*For more information, please see the Provider Voice in Home-Based Child Care Networks Scale (PV-HBCCN) companion brief on our website: [www.erikson.edu/research/building-home-based-child-care-networks-research-resources-for-the-field/](http://www.erikson.edu/research/building-home-based-child-care-networks-research-resources-for-the-field/).*