

Development of a Scale to Assess the Emotional and Behavioral Strengths of Preschoolers

Michael H. Epstein
Lori Synhorst,
and
Molly J. Murray
University of Nebraska-Lincoln

Content Development

Evaluate Original 52-item BERS (31 items)

Review Literature (add 39 items)

Protective Factors

Risk and Resilience Factors

Social Emotional Development

Review Preschool Tests

Item Selection

Compare children with and without
disabilities (delete 13 items)

Factor analysis (delete 15 items)

National Samples

Preschool Sample = 1308

Head Start = 962

Special Education = 1103

Demographic Characteristics of the PreBERS Preschool Norming Sample		
Characteristics	Percentage of Sample	Percentage of School- Age Population
Geographic Area		
Northeast	17	18
South	38	36
Midwest	23	22
West	22	24
Gender		
Male	52	51
Female	48	49
Spanish/Hispanic		
Yes	13	14
No	87	86

Characteristics	Percentage of Sample	Percentage of School- Age Population
Ethnicity		
White	78	80
Black/African American	14	13
Am. Indian/ Eskimo/ Aluet	1	1
Asian/Pacific Islander	4	4
Two or more	2	2
Other	2	0
Exceptionality Status		
Disability	18	14
No Disability	82	88

Emotional Regulation	
Item	Loading
Controls anger toward others	.836
Expresses remorse of behavior that hurts others	.719
Shows concern for feelings of others	.770
Reacts to disappointments calmly	.826
Handles frustration with challenging tasks	.783
Takes turns in play situations	.838
Accepts responsibility for own actions	.867
Loses a game gracefully	.834
Accepts "no" for an answer	.864
Respects rights of others	.856
Shares with others	.856
Apologizes to others when wrong	.787
Is kind toward others	.821
Eigenvalues	21.37

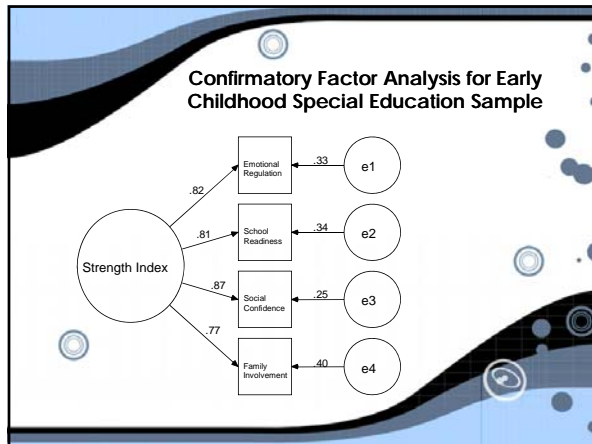
School Readiness	
Item	Loading
Understands meaning of words similar to peers	.809
Carries on conversations	.777
Persists with tasks until completed	.726
Demonstrates age-appropriate hygiene	.624
Understands complex sentences	.879
Listens to the conversations of others	.778
Pays attention to tasks	.796
Listens attentively when stories are read	.764
Follows multi-step directions	.809
Retells stories or recent events	.783
Uses detail in talking with others	.822
Works independently	.713
Uses numbers/color words correctly	.794
Eigenvalues	2.97

Social Confidence	
Item	Loading
Is self confident	.692
Acknowledges painful feelings	.761
Asks for help	.790
Stands up for self	.623
Accepts closeness/intimacy of others	.757
Identifies own feelings	.784
Makes friends	.695
Asks others to play	.704
Is enthusiastic about life	.700
Eigenvalues	2.22

Family Involvement	
Item	Loading
Sense of belonging to family	.842
Trusts significant person	.823
Maintains positive family relationships	.830
Reacts positively with parents	.802
Is involved in family discussions	.716
Interacts positively with siblings	.648
Participates in family activities	.824
Eigenvalues	1.62

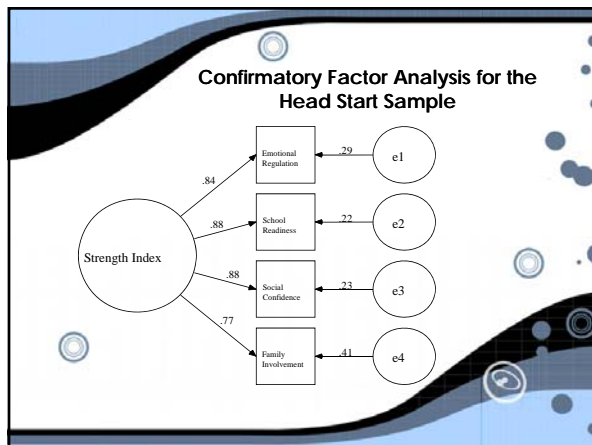
Means and Standard Deviations of Males and Females on the PreBERS					
Domain	Male	Female	t-Score	p-Value	Hedges Effect Size
Emotional Regulation	9.42 (3.08)	10.51 (2.65)	6.807	.001	.38
School Readiness	9.46 (2.98)	10.66 (2.80)	7.482	.001	.41
Social Confidence	9.31 (2.98)	10.53 (2.89)	7.526	.001	.42
Family Involvement	9.69 (2.96)	10.45 (2.68)	4.876	.001	.27
Total Score	96.81 (16.08)	103.19 (14.09)	7.608	.001	.42

Demographic Characteristics of the PreBERS Early Childhood Special Education Norming Sample (N=1103)		
Characteristics	Percentage of Sample	Percentage of US ECSE Early Childhood Special Education Population
Geographic Area		
Northeast	20	24
South	29	26
Midwest	46	26
West	5	24
Gender		
Male	70	70
Female	30	30
Spanish/Hispanic		
Yes	11	14
No	89	86
Ethnicity		
White	69	67
Black/African American	14	15
Other	17	18
Age		
3 (n=452)	32	22
4 (n=581)	44	38
5 (n=438)	24	40



Demographic Characteristics of the PreBERS Head Start Norming Sample (N=962)

Characteristics	Percentage of Sample	Percentage of US Head Start Population
Geographic Area		
Northeast	7	18
South	39	25
Midwest	38	39
West	16	22
Gender		
Male	51	50
Female	49	50
Hispanic		
Yes	31	31
No	69	69
Race		
White	30	27
Black/African American	25	31
Other	45	42
Disability		
Yes	16	13
No	84	87
Age		
3 (n=452)	30	38
4 (n=581)	47	54
5 (n=438)	23	8



Reliability Studies

Coefficient Alphas for PreBERS Preschool Scores by Age and Gender

PreBERS Value	Males				Females			
	3	4	5	AVG	3	4	5	AVG
Subscales								
Emotional Regulation	.94	.96	.97	.96	.94	.95	.95	.95
School Readiness	.93	.94	.95	.94	.94	.96	.96	.95
Social Confidence	.90	.89	.91	.90	.90	.93	.91	.91
Family Involvement	.87	.90	.91	.89	.84	.89	.90	.88
Composite								
Strength Index	.97	.97	.98	.97	.97	.98	.98	.98

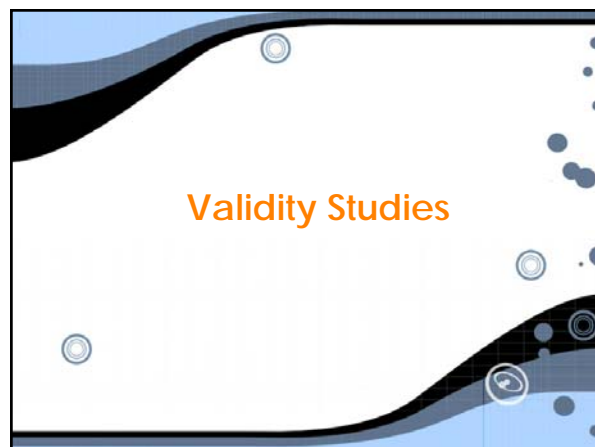
Coefficient Alphas for Selected Subgroups of the Preschool Sample Scores by Subscales

PreBERS Value	Entire Sample	White (n=968)	Black (n=201)	Hispanic (n=204)	Disabled (n=258)
Subscales					
Emotional Regulation	.96	.96	.95	.96	.96
School Readiness	.95	.95	.94	.95	.95
Social Confidence	.91	.90	.88	.87	.90
Family Involvement	.89	.90	.88	.87	.90
Composite					
Strength Index	.98	.98	.97	.98	.98

Short Term Test-Retest Reliability of the PreBERS				
	First Rating	Second Rating	R	Adjusted R Square (% variance)
Emotional Regulation				
Mean	9.5	9.5		
SD	(3.626)	(3.436)	.90	80%
School Readiness				
Mean	8.49	8.43		
SD	(3.963)	(3.919)	.93	86%
Social Confidence				
Mean	9.15	9.23		
SD	(3.707)	(3.397)	.88	76%
Family Involvement				
Mean	9.84	9.85		
SD	(2.999)	(2.959)	.86	74%
Total Strength Index				
Mean	94.8	94.87		
SD	(20.831)	(19.493)	.93	87%

Teacher-Paraprofessional Interrater Reliability of the PreBERS				
	Teacher Rating	Paraprofessional Rating	R	Adjusted R Square (% variance)
Emotional Regulation				
Mean	9.06	8.23		
SD	(3.752)	(3.272)	.86	73%
School Readiness				
Mean	8.05	7.67		
SD	(4.107)	(3.400)	.85	71%
Social Confidence				
Mean	8.67	7.84		
SD	(3.829)	(3.457)	.80	63%
Family Involvement				
Mean	9.51	8.63		
SD	(3.081)	(2.760)	.72	51%
Total Strength Score				
Mean	92.01	88.07		
SD	(21.400)	(18.375)	.87	75%

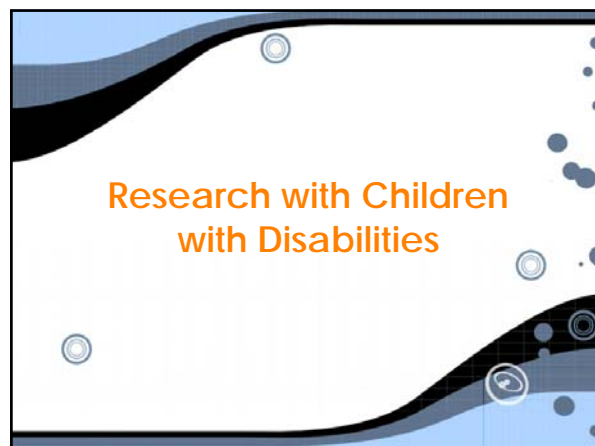
Long Term Reliability of the PreBERS				
PreBERS Scales	Rating 1	Rating 2	R	Adjusted R Square (% variance)
Emotional Regulation				
Mean	9.45	9.92		
SD	(3.72)	(3.31)	.895	80%
School Readiness				
Mean	8.42	8.99		
SD	(4.06)	(3.73)	.903	81%
Social Confidence				
Mean	9.09	9.80		
SD	(3.70)	(3.12)	.809	65%
Family Involvement				
Mean	9.95	10.48		
SD	(3.09)	(2.36)	.793	62%
Total Strength Score				
Mean	94.6	98.3		
SD	(21.18)	(17.68)	.906	82%



Correlation Coefficients Between the PreBERS and the Caregiver - TRF with Teachers as Responders			
PreBERS Scales	Internalizing	Externalizing	Total Problem
Emotional Regulation	-.730	-.811	-.844
School Readiness	-.661	-.656	-.744
Social Confidence	-.734	-.612	-.751
Family Involvement	-.656	-.691	-.735
Total Strength Index	-.758	-.753	-.837
Note: All were statistically significant at the $p > .0001$ level.			

Comparison of the PreBERS Scores for Preschool Children With and Without Disabilities					
PreBERS Scales	Disability Mean Score (SD)	No Disability Mean Score (SD)	T-Score	P Value	Hedges Effect Size
Emotional Regulation	8.20 (3.03)	10.27 (2.80)	9.690	.001	.73
School Readiness	8.20 (2.99)	10.38 (2.82)	10.166	.001	.77
Social Confidence	8.18 (2.95)	10.21 (2.90)	9.275	.001	.70
Family Involvement	8.68 (3.15)	10.31 (2.72)	7.059	.001	.59
Strength Index	89.55 (15.69)	101.81 (14.66)	10.978	.001	.83

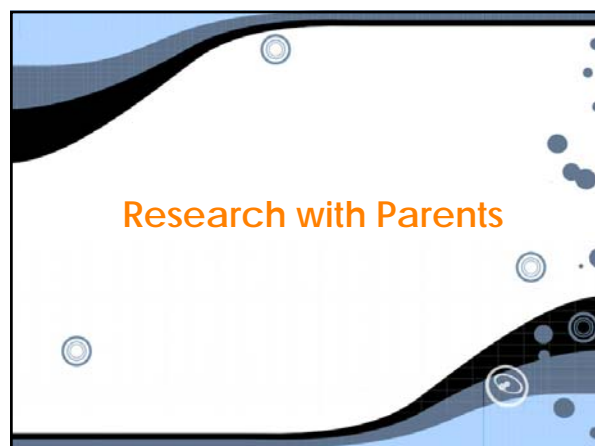
Comparison of PreBERS Scores for Preschool Children With and Without EBD					
PreBERS Scales	EBD Mean Score (SD)	No Disability Mean Score (SD)	t Score	p Value	Hedges G Effect Size
Emotional Regulation	6.69 (3.36)	9.44 (3.59)	4.15	.000	.79
School Readiness	5.78 (2.54)	9.750 (3.95)	6.26	.000	1.48
Social Confidence	5.69 (2.78)	9.56 (3.89)	6.01	.000	1.14
Family Involvement	4.17 (2.24)	8.93 (3.97)	7.73	.000	1.47
Total Strength Index	73.69 (13.87)	96.16 (22.78)	6.25	.000	1.18



Short Term Test-Retest Reliability of the PreBERS with Teachers as Raters of Children with Disabilities				
PreBERS subscale	First Rating	Second Rating	R	Adjusted R Square (% variance)
Emotional Regulation				
Mean	7.71	7.83		
SD	(3.494)	(3.185)	.895	80%
School Readiness				
Mean	6.33	6.25		
SD	(3.389)	(3.053)	.908	82%
Social Confidence				
Mean	7.22	7.46		
SD	(3.424)	(2.901)	.831	69%
Family Involvement				
Mean	8.40	8.62		
SD	(2.905)	(3.061)	.843	71%
Total Strength Index				
Mean	83.43	84.22		
SD	(18.946)	(16.880)	.917	84%

Short Term Test-Retest Reliability of the PreBERS with Parents as Raters of Children with Disabilities				
PreBERS subscale	First Rating	Second Rating	R	Adjusted R Square (% variance)
Emotional Regulation				
Mean	8.41	8.39		
SD	(2.486)	(2.311)	.908	82%
School Readiness				
Mean	8.25	8.21		
SD	(2.433)	(2.524)	.876	76%
Social Confidence				
Mean	9.69	9.66		
SD	(2.320)	(2.509)	.843	71%
Family Involvement				
Mean	9.34	9.31		
SD	(2.265)	(2.277)	.832	69%
Total Strength Score				
Mean	93.20	92.82		
SD	(12.916)	(13.127)	.945	89%

Inter-rater Reliability of the PreBERS with Teachers and Paraprofessionals as Raters of Children with Disabilities				
PreBERS subscale	Teacher	Paraprofessional	R	Adjusted R Square (% variance)
Emotional Regulation				
Mean	7.71	7.27		
SD	(3.494)	(3.194)	.868	75%
School Readiness				
Mean	6.33	6.44		
SD	(3.389)	(2.889)	.790	62%
Social Confidence				
Mean	7.22	6.73		
SD	(3.424)	(3.127)	.763	58%
Family Involvement				
Mean	8.40	7.81		
SD	(2.905)	(2.507)	.702	48%
Total Strength Score				
Mean	83.43	81.62		
SD	(18.946)	(16.670)	.851	72%



Correlation Coefficients Between Subscales for the PreBERS and the Caregiver - TRF with Parents as Responders			
Subscale	Internalizing	Externalizing	Total Problem
Emotional Regulation	-.617	-.775	-.738
School Readiness	-.536	-.574	-.616
Social Confidence	-.444	-.370	-.432
Family Involvement	-.548	-.668	-.672
Total Strength Score	-.615	-.689	-.705

Note: All were statistically significant at the $p > .0001$ level.

Test-Retest Reliability of the PreBERS with Parents as Responders						
	First Testing		Second Testing		<i>R</i>	Adjusted R Square (% Variance)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Emotional Regulation	9.00	2.356	9.09	2.280	.877	.769
School Readiness	9.13	2.558	9.21	2.731	.883	.779
Social Confidence	10.22	2.258	10.28	2.434	.787	.619
Family Involvement	9.87	2.273	9.95	2.292	.793	.629
Total Strength Score	97.18	12.769	97.38	13.236	.920	.846

Note: All of the correlations were statistically significant at the $p < .0001$ level.

PreBERS Standard Score Means for Preschool Sample and Selected Subgroups							
PreBERS Value	Subgroups						
	Total Sample	Male (n=658)	Female (n=604)	White (n=993)	Black (n=164)	Hispanic (n=172)	Disabled (n=199)
Subscales							
Emotional Regulation	10	9	10	10	9	10	8
School Readiness	10	9	10	10	9	9	8
Social Confidence	10	9	10	10	10	10	8
Family Involvement	10	10	10	10	10	10	9
Total Strength Index	100	97	103	100	97	98	91

PreBERS
Preschool Behavioral and Emotional Rating Scale
Summary/Response Form
Version 1.0 (2008) | Last Edition

Section 1: Identifying Information

Name: _____ Sex: ☐ Male ☐ Female Age: _____
 Date of Birth: _____
 Date of Testing: _____
 School: _____
 Report Number: _____
 Respondent Name: _____
 Respondent Title: _____

Section 2: Results of the PreBERS

Subscales: _____
 1. Emotional Regulation (ER) _____
 2. School Readiness (SR) _____
 3. Social Confidence (SC) _____
 4. Family Involvement (FI) _____

Section 3: Composite Performance

Composite: _____
 PreBERS Strength Index: _____

Section 4: Clinical Interpretation

Who referred the student? _____
 What was the reason for the referral? _____
 Personal permission obtained on record? ☐ Yes ☐ No
 PreBERS results released in writing or planning conference? ☐ Yes ☐ No

Section 5: Descriptive Items

Descriptive Item	1-3	4-6	7-9	10-12	13-15	16-18	19-20
1. Emotional Regulation (ER)	1-3	4-6	7-9	10-12	13-15	16-18	19-20
2. School Readiness (SR)	1-3	4-6	7-9	10-12	13-15	16-18	19-20
3. Social Confidence (SC)	1-3	4-6	7-9	10-12	13-15	16-18	19-20
4. Family Involvement (FI)	1-3	4-6	7-9	10-12	13-15	16-18	19-20

Section 6: Response Form

Directions: The PreBERS Behavioral and Emotional Rating Scale (PreBERS) contains a series of statements that are used to rate a preschool child's behavior and emotional functioning. For each statement, you will rate the child's behavior on a scale of 1 to 3. The statements are in the column on the left. The response form is on the right. In the column on the right, you will write the child's behavior in relation to other preschool children of similar age and gender. Use your best judgment in the case of your knowledge of the child.

Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Communicates a sense of belonging to family																				
2. Thinks significant person in his or her life																				
3. Understands the meaning of words similar to same-age peers																				
4. Social confidence																				
5. Demonstrates positive feelings																				
6. Maintains positive family relationships																				
7. Likes to play																				
8. Controls anger (outlet) calmly																				
9. Controls on communication																				
10. Responds to requests for behavior that helps others																				
11. Shows concern for the feelings of others																				
12. Shows confidence with others																				
13. Shows to demonstrate ability																				
14. Shows with skills and competence																				
15. Shows to be well																				
16. Handles frustration with challenging tasks																				
17. Demonstrates age-appropriate hygiene skills																				

Column activities: ☐

Section 7: Summary

Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
18. Total time in play situations																				
19. Is involved in family situations																				
20. Shows confidence and feelings of others																				
21. Shows positive feelings																				
22. Shows confidence																				
23. Shows confidence for peer actions																				
24. Shows confidence with others																				
25. Shows confidence with others																				
26. Shows confidence to play																				
27. Shows confidence to play																				
28. Shows confidence to play																				
29. Shows confidence to play																				
30. Shows confidence to play																				
31. Shows confidence to play																				
32. Shows confidence to play																				
33. Shows confidence to play																				
34. Shows confidence to play																				
35. Shows confidence to play																				
36. Shows confidence to play																				
37. Shows confidence to play																				
38. Shows confidence to play																				
39. Shows confidence to play																				
40. Shows confidence to play																				
41. Shows confidence to play																				
42. Shows confidence to play																				
43. Shows confidence to play																				
44. Shows confidence to play																				
45. Shows confidence to play																				

Column activities: ☐

- o A total of 42 clearly stated items
- o Seven open-ended questions so that respondents can note the child's strengths
- o The scale includes four subscales: Emotional Regulation, School Readiness, Social Confidence, and Family Involvement
- o Scale is designed for use by school personnel, parents, and other professionals
- o Norms based on national samples of preschool, Head Start, and Early Childhood Special Education children
- o Validity and reliability clearly established
- o Scale can be completed in less than 10 minutes
- o Standard Scores are provided for comparing children

- o To identify the emotional and behavioral strengths of preschool children
- o To identify children with limited strengths
- o To target goals for IEP, IFSP, or individual treatment plan
- o To document progress in a strength area as a consequence of specialized services
- o To measure strengths in research and evaluation projects

Behavior and Emotional Strength	Subscale Scaled Scores	Probability Student Has EBD	PreBERS Strength Index	Percentage Included in Bell-Shaped Distribution
Very Superior	17-20		>130	2.34
Superior	15-16	Extremely low	121-130	6.87
Above Average	13-14	Very low	111-120	16.12
Average	8-12	Low	90-110	49.51
Below Average	6-7	High	80-89	16.12
Poor	4-5	Very high	70-79	6.87
Very Poor	1-3	Extremely high	< 70	2.34

Note. EBD = emotional and behavioral disorders. These guidelines are for use with the PRE sample

7