Appendix C. Supplementary Item Bank Analysis

Table A1. Item Level Descriptive Statistics and Confirmatory Factor Analysis Loadings for the PROMIS Pediatric Sleep Disturbance Item Banks, Child-Report and Parent-Proxy Editions, General Population Sample.

Items	CFA Factor Loading	Mean	SD	Skew	Never (%)	Almost Never (%)	Sometimes (%)	Almost Always (%)	Always (%)
Difficulty falling asleep									
Child-report	0.89	2.1	1.1	0.84	37.6	30.2	22.7	5.8	3.7
Parent-proxy	0.91	1.6	0.88	1.44	59.1	24.8	12.1	3.0	1.0
Easy to fall asleep									
Child-report	0.78	2.2	1.0	0.74	3.6	6.9	23.7	37.2	28.7
Parent-proxy	0.76	2.0	1.0	1.00	3.1	5.8	16.5	40.3	34.3
Worried about not being able to fall asleep									
Child-report	0.75	1.5	0.80	1.48	66.9	18.3	12.9	1.6	0.3
Parent-proxy	0.82	1.3	0.67	2.31	77.8	14.2	6.6	1.1	0.3
Trouble falling asleep because worried									
Child-report	0.73	1.6	0.84	1.31	62.2	20.8	14.5	2.1	0.4
Parent-proxy	0.85	1.4	0.69	1.75	71.6	18.7	9.0	0.6	0.2
Trouble stopping thoughts at bedtime									
Child-report	0.74	2.2	1.1	0.62	38.2	22.2	27.6	8.0	4.1
Parent-proxy	0.73	1.9	1.0	0.98	46.5	26.3	20.5	4.3	2.4
Trouble falling asleep could not get comfortable									
Child-report	0.76	1.9	1.0	0.82	46.2	23.5	24.5	4.1	1.8
Parent-proxy	0.80	1.5	0.78	1.28	62.0	24.0	12.4	1.4	0.2
Took long time to fall asleep									
Child-report	0.90	2.2	1.1	0.66	35.2	27.9	27.1	6.4	3.4

Items	CFA Factor Loading	Mean	SD	Skew	Never (%)	Almost Never (%)	Sometimes (%)	Almost Always (%)	Always (%)
Parent-proxy	0.85	1.8	0.94	0.97	44.9	32.2	17.3	4.4	1.2
Slept through the night									
Child-report	0.74	1.7	0.92	1.38	1.8	3.8	10.7	33.7	50.0
Parent-proxy	0.67	1.6	0.92	1.95	3.0	1.8	6.6	29.1	59.5
Woke up at night and worried about not going back to sleep									
Child-report	0.79	1.5	0.79	1.63	69.3	17.0	11.9	1.4	0.4
Parent-proxy	0.79	1.3	0.59	2.12	77.8	16.1	5.6	0.4	0.1
Woke up at night and had trouble falling back to sleep									
Child-report	0.81	1.7	0.92	1.10	55.6	22.4	18.4	2.7	1.0
Parent-proxy	0.81	1.5	0.73	1.38	63.2	25.5	10.1	1.1	0.2
Woke up too early and could not fall back asleep									
Child-report	0.70	1.8	0.97	0.86	48.6	24.5	21.9	3.9	1.1
Parent-proxy	0.70	1.6	0.81	1.12	55.0	28.9	14.1	1.6	0.4
Tossed and turned at night									
Child-report	0.75	2.0	1.1	0.91	44.1	24.6	22.3	5.3	3.8
Parent-proxy	0.70	1.8	0.95	1.13	51.7	26.5	17.0	3.4	1.4
Slept poorly									
Child-report	0.89	1.8	0.93	1.11	50.4	28.5	16.0	3.9	1.2
Parent-proxy	0.86	1.6	0.79	1.41	57.8	29.8	9.9	1.9	0.6
Problem with sleep									
Child-report	0.87	1.7	0.90	1.29	57.3	24.4	14.2	3.1	1.0
Parent-proxy	0.87	1.6	0.83	1.60	61.1	26.1	9.9	2.0	1.0
Trouble sleeping									
Child-report	0.92	1.8	0.94	1.04	51.4	25.9	18.0	3.6	1.1

Items	CFA Factor Loading	Mean	SD	Skew	Never (%)	Almost Never (%)	Sometimes (%)	Almost Always (%)	Always (%)
Parent-proxy	0.95	1.5	0.80	1.57	62.5	25.3	9.8	1.8	0.6

Table A2. Item Level Descriptive Statistics and Confirmatory Factor Analysis Loadings for the PROMIS Pediatric Sleep-related Impairment Item Banks, Child-Report and Parent-Proxy Editions, General Population Sample.

Items	CFA Factor Loading	Mean	SD	Skew	Never (%)	Almost Never (%)	Sometimes (%)	Almost Always (%)	Always (%)
Sleepy during the daytime									
Child-report	0.85	2.2	1.0	0.47	32.4	26.4	33.8	4.8	2.7
Parent-proxy	0.78	2.0	0.85	0.42	34.7	36.8	26.3	1.8	0.5
Trouble staying awake during the day									
Child-report	0.88	1.7	0.85	1.20	55.1	27.9	14.1	2.2	0.6
Parent-proxy	0.88	1.4	0.63	1.70	73.0	18.4	7.1	0.5	0.0
Hard time concentrating because sleepy									
Child-report	0.83	1.9	0.92	0.62	45.7	25.6	25.3	3.0	0.4
Parent-proxy	0.90	1.5	0.73	1.24	63.2	24.1	11.8	0.7	0.1
Bad mood because sleepy									
Child-report	0.85	1.8	0.92	0.82	48.7	25.3	22.7	2.5	0.9
Parent-proxy	0.75	2.0	0.88	0.39	35.7	33.2	28.2	2.6	0.4
Got mad easily because sleepy									
Child-report	0.84	1.8	0.97	0.96	50.9	23.3	21.0	3.5	1.3
Parent-proxy	0.85	1.7	0.86	0.86	50.0	28.3	19.9	1.3	0.6

Items	CFA Factor Loading	Mean	SD	Skew	Never (%)	Almost Never (%)	Sometimes (%)	Almost Always (%)	Always (%)
Trouble controlling feelings because sleepy									
Child-report	0.81	1.7	0.88	1.04	55.7	23.7	17.5	2.6	0.4
Parent-proxy	0.83	1.6	0.78	0.92	55.0	28.9	15.0	1.2	0.0
Still felt sleepy when woke up									
Child-report	0.69	2.7	1.2	0.21	20.4	21.2	37.4	12.7	8.3
Parent-proxy	0.64	2.2	1.0	0.48	29.9	31.3	28.9	7.9	2.1
Hard time getting things done because sleepy									
Child-report	0.89	1.7	0.87	0.95	51.0	28.8	16.7	3.1	0.3
Parent-proxy	0.91	1.5	0.69	1.27	64.2	25.6	9.6	0.6	0.0
Problems during the day because of poor sleep									
Child-report	0.92	1.5	0.78	1.19	61.8	23.4	13.2	1.6	0.0
Parent-proxy	0.88	1.5	0.73	1.47	63.3	26.0	9.4	1.0	0.3
Hard to have fun because sleepy									
Child-report	0.86	1.5	0.75	1.57	68.2	19.5	11.1	0.9	0.3
Parent-proxy	0.85	1.3	0.61	1.65	71.7	22.1	5.8	0.4	0.0
Trouble sitting still because sleepy									
Child-report	0.83	1.4	0.73	1.83	71.1	18.8	8.5	1.3	0.3

Items	CFA Factor Loading	Mean	SD	Skew	Never (%)	Almost Never (%)	Sometimes (%)	Almost Always (%)	Always (%)
Parent-proxy	0.81	1.3	0.62	1.92	73.4	20.5	5.3	0.7	0.1
Could not keep eyes open during the day									
Child-report	0.85	1.5	0.76	1.49	66.5	21.0	11.0	1.3	0.2
Parent-proxy	0.82	1.4	0.63	1.76	69.6	24.1	5.8	0.3	0.2
Daytime activities disturbed by poor sleep									
Child-report	0.88	1.5	0.80	1.38	63.9	21.4	12.8	1.6	0.3
Parent-proxy	0.95	1.4	0.63	1.62	72.1	20.1	7.5	0.3	0.0

Table A3. Exploratory Factor Analysis for Final Sleep Disturbance and Sleep Related Impairment, Child-Report.

Item	Item Bank	2 Factor Solution	
		Factor 1	Factor 2
Difficulty falling asleep	Sleep Disturbance	**0.90**	0.57
Easy to fall asleep	Sleep Disturbance	**0.79**	0.50
Worried about not being able to fall asleep	Sleep Disturbance	**0.73**	0.63
Trouble falling asleep because worried	Sleep Disturbance	**0.71**	0.64
Trouble stopping thoughts at bedtime	Sleep Disturbance	**0.74**	0.55
Trouble falling asleep could not get comfortable	Sleep Disturbance	**0.76**	0.57
Took long time to fall asleep	Sleep Disturbance	**0.91**	0.60
Slept through the night	Sleep Disturbance	**0.73**	0.55
Woke up at night and worried about not going back to sleep	Sleep Disturbance	**0.78**	0.58
Woke up at night and had trouble falling back to sleep	Sleep Disturbance	**0.81**	0.58
Woke up too early and could not fall back asleep	Sleep Disturbance	**0.71**	0.46
Tossed and turned at night	Sleep Disturbance	**0.74**	0.57
Slept poorly	Sleep Disturbance	**0.87**	0.71
Problem with sleep	Sleep Disturbance	**0.84**	0.73
Trouble sleeping	Sleep Disturbance	**0.91**	0.70
Sleepy during the daytime	Sleep Related Impairment	0.57	**0.85**
Trouble staying awake during the day	Sleep Related Impairment	0.58	**0.89**
Hard time concentrating because sleepy	Sleep Related Impairment	0.63	**0.83**

Item	Item Bank	2 Factor Solution	
		Factor 1	Factor 2
Bad mood because sleepy	Sleep Related Impairment	0.65	**0.84**
Got mad easily because sleepy	Sleep Related Impairment	0.64	**0.83**
Trouble controlling feelings because sleepy	Sleep Related Impairment	0.64	**0.79**
Still felt sleepy when woke up	Sleep Related Impairment	0.59	**0.67**
Hard time getting things done because sleepy	Sleep Related Impairment	0.66	**0.88**
Problems during the day because of poor sleep	Sleep Related Impairment	0.68	**0.92**
Hard to have fun because sleepy	Sleep Related Impairment	0.70	**0.85**
Trouble sitting still because sleepy	Sleep Related Impairment	0.61	**0.83**
Could not keep eyes open during the day	Sleep Related Impairment	0.53	**0.86**
Daytime activities disturbed by poor sleep	Sleep Related Impairment	0.69	**0.87**

Eigenvalues= 17.1; 2.2; 1.0; 0.8; 0.8; 0.7; 0.6; 0.5. Correlation between factors=0.68.