

Psychological Stress and Anxiety Among Parents of Children Younger Than 2 Years Hospitalized With RSV

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BACKGROUND

- Respiratory syncytial virus (RSV) is one of the most common causes of childhood lower respiratory tract infection (LRTI) worldwide
- RSV infection is associated with significant healthcare utilization; associated financial burden is well documented
- While it is well recognized that hospitalization is a stressful event for parents, the experience of parents whose children were hospitalized with RSV infection has not been well studied
- We evaluated the social and psychological stress of parents whose children were hospitalized with RSV infection

METHODS

- Salt Lake County (SLC) resident children (<2 years of age) hospitalized with laboratory-confirmed RSV LRTI at Primary Children's and Riverton Hospitals in Salt Lake City, Utah, for the 2019-2020 RSV season were prospectively identified
- Parents of children hospitalized with RSV infection were consented to participate in an in-person interview and online survey after discharge
- Parents completed the following surveys:
 - State-Trait Anxiety Inventory for Adults (STAIAD) instrument (short form)
 - Parental Stressor Scale (PSS)
- We evaluated and compared parental stress and anxiety during hospitalization (STAIAD and PSS) and at 2 weeks post-discharge (STAIAD)

SURVEY INSTRUMENTS

Parental Stressor Scale (PSS)

- The PSS measures parental perception of stressors arising from the physical and psychosocial environment in the hospital on a 5-point scale (eg, from "not at all stressful" to "extremely stressful")

State-Trait Anxiety Inventory for Adults (STAIAD)

- The STAIAD is an instrument for measuring anxiety in adults on a 4-point scale (eg, from "almost never" to "almost always"). It differentiates between the temporary condition of "state anxiety" (eg, "I am tense") and the more general and long-standing quality of "trait anxiety" (eg, "I am a steady person")

RESULTS

Table 1. Estimates of Psychological Burden of RSV LRTI Hospitalization of Children <2 Years of Age on Parents: Parental Stressor Scale (PSS)

Variable	N	PSS Score		Percent Reporting		
		Mean	Std. Dev	Not at All Stressful	Little or Moderately Stressful	Very or Extremely Stressful
Feeling helpless about how to help my baby during this time	73	4.23	0.98	2.74	13.70	83.57
My baby's unusual or abnormal breathing pattern	74	4.24	0.93	2.70	14.86	82.43
Feeling helpless and unable to protect my baby	71	4.15	1.09	2.82	21.12	76.05
When my baby seemed to be in pain	68	4.04	1.01	1.47	25.00	73.53
The limp and weak appearance of my baby	63	3.90	1.06	4.76	22.22	73.02
Being separated from my baby	54	3.98	1.27	7.41	24.08	68.52
Having a machine breathe for my baby	6	4.17	1.33	0.00	33.34	66.67
When my baby looked sad	72	3.92	0.99	0.00	36.11	63.89
Seeing needles and tubes put in my baby	50	3.76	1.29	10.00	28.00	62.00
Not being able to hold my baby when I want	23	3.52	1.31	8.70	30.43	60.87
Not feeding my baby myself	22	3.95	1.17	0.00	40.91	59.09
The unusual color of my baby	56	3.52	1.46	16.07	26.79	57.14
Tubes and equipment on or near my baby	74	3.61	1.21	8.11	35.14	56.76
My baby not being able to cry like other babies	47	3.64	1.21	6.38	40.42	53.19
Bruises, cuts, or incisions on my baby	35	3.09	1.52	25.71	22.86	51.43
My baby being fed by an intravenous line or tube	15	3.33	1.40	13.33	40.00	46.67
Not having time alone with my baby	15	3.07	1.67	33.33	20.00	46.67
Jerky or restless movements of my baby	56	3.27	1.26	7.14	48.21	44.64
Other sick babies in the room	36	2.97	1.63	33.33	22.23	44.44
Sudden noise of monitor alarm	71	3.20	1.32	12.68	47.89	39.44
The small size of my baby	31	2.81	1.66	35.48	25.80	38.71
Not being able to care for my baby myself	29	2.62	1.42	31.03	41.38	27.58
The wrinkled appearance of my baby	9	2.00	1.50	55.56	22.22	22.22
Constant of monitors and equipment	70	2.30	1.21	28.57	52.86	18.57
Presence of monitors and equipment	75	2.23	1.13	33.33	53.33	13.33
Large number of people working in the unit	63	1.51	0.93	71.43	20.64	7.94

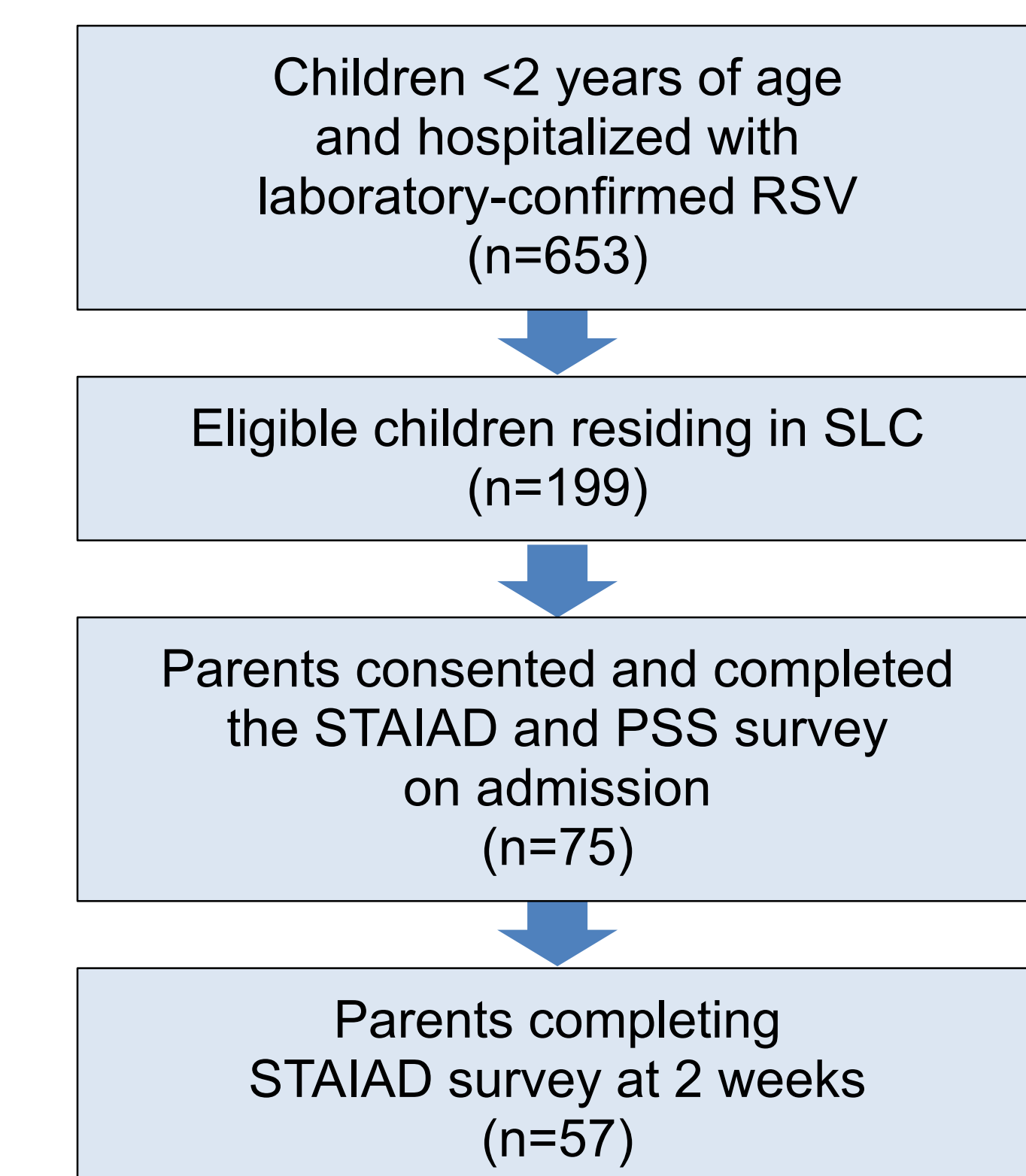
Table 2. Estimates of Psychological Burden of RSV LRTI Hospitalization of Children <2 Years of Age on Parents: State-Trait Anxiety Inventory for Adults (STAIAD)

STAIAD Item	N	During Admission		Post-discharge		Difference in Mean: During Adm.-Post-Adm	t	Significance Probability
		Mean	Std. Dev	Mean	Std. Dev			
Positive outlook								
I feel calm	55	2.58	0.13	2.89	0.12	-0.31	-2.39	0.02*
I feel at ease	55	2.15	0.15	2.51	0.13	-0.36	-2.00	0.05
I am relaxed	55	2.15	0.14	2.56	0.13	-0.42	-3.46	0.00**
I feel steady	55	2.58	0.13	2.60	0.14	-0.02	-0.12	0.91
I feel satisfied with myself	56	2.55	0.14	2.89	0.13	-0.34	-2.02	0.05*
I am a steady person	56	3.30	0.11	3.05	0.12	0.25	1.85	0.07
Negative outlook								
I am tense	56	2.39	0.14	1.91	0.13	0.48	2.89	0.01**
Worry over misfortunes	56	2.43	0.16	2.38	0.15	0.05	0.30	0.77
I feel frightened	56	1.95	0.15	1.55	0.12	0.39	2.66	0.01*
I feel nervous	56	2.45	0.14	1.86	0.13	0.59	3.76	0.00***
I feel jittery	56	1.71	0.14	1.45	0.11	0.27	1.76	0.08
I am worried	56	2.80	0.13	2.25	0.13	0.55	4.27	0.00***
I feel nervous and restless	56	2.45	0.16	1.79	0.13	0.66	4.37	0.00***
Wish I could be happy as others	53	1.64	0.14	1.59	0.12	0.06	0.34	0.73
I feel like a failure	55	1.49	0.12	1.38	0.10	0.11	0.86	0.39
Worry: things that don't matter	53	2.08	0.15	1.77	0.12	0.30	2.53	0.01*
I lack self-confidence	56	1.55	0.10	1.34	0.09	0.21	2.27	0.03*
I feel insecure	55	3.31	0.12	2.95	0.13	0.36	2.63	0.01*
I feel inadequate	55	1.67	0.13	1.49	0.11	0.18	1.43	0.16
I get in state of tension and turmoil	53	2.08	0.15	1.96	0.13	0.11	1.00	0.32

Note on significance probabilities: *P<0.05; **P<0.01; and ***P<0.001.

RESULTS

Parental Consent of Salt Lake County Children <2 Years of Age Hospitalized With RSV Infection



PSS (hospitalization only)

- During hospitalization, over 50% of parents rated 15 out of 25 PSS items as being "very or extremely stressful" (Table 1)
- The item identified by the highest proportion of parents as being "very or extremely stressful" is feeling helpless about how to help my baby during this time (83.57%), while the item with the lowest proportion is the large number of people working in the unit (7.94%)

STAIAD (hospitalization and 2 weeks post-discharge)

- On 11 of 20 STAIAD items gauging stress and anxiety, parents reported higher levels of stress and anxiety while their children were admitted compared to post-discharge (Table 2)
- Parents' average score on several items associated with a "positive outlook" significantly (P<0.05) improved at 2 weeks post-discharge, while those associated with a "negative outlook" significantly decreased (Table 2)

CONCLUSIONS

- RSV LRTI hospitalization among children younger than 2 years of age imposed significant psychological stress and anxiety on parents, which generally persisted up to 2 weeks post-discharge
- Prevention of RSV infection through vaccines and immunoprophylaxis will help ease parental psychological burden associated with RSV hospitalization of their children
- Future research will characterize psychological stress and anxiety experienced by parents of children who get readmitted after RSV hospitalization

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