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Rates of Depression Among Primary Caregivers of Children with Tracheostomies

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Introduction

Caring for a child with a tracheostomy carries numerous financial, physical, and emotional challenges. Literature has shown that these caregivers experience burden that correlates with their child's illness severity and their own mental health status. Caregivers of technology-dependent and chronically ill children have been found to have higher rates of depression, but similar findings have not been reported for pediatric tracheostomy caregivers. Thus, the objective of this study was to assess rates of depression among primary caregivers of children with tracheostomies.

Methodology

A database of children ages 0 to 18 with tracheostomies at a tertiary pediatric hospital was screened to identify patients' primary caregivers. Exclusion criteria included state custody/foster care, lack of follow-up within the past 2 years, caregiver age < 18, and a caregiver-reported history of depression. Eligible caregivers were contacted over a 3-month period; participants completed a demographic form and the Beck Depression Inventory-II (BDI-II). Mental health resources were offered if BDI-II scores indicated any level of depression and caregivers agreed to receiving resources. Basic patient health data were also collected.

The BDI-II Scoring System Scale

Total Score	Levels of Depression
1-10	These ups and downs are considered normal
11-16	Mild mood disturbance
17-20	Borderline clinical depression
21-30	Moderate depression
31-40	Severe depression
Over 40	Extreme depression

Results

- Of those who completed the BDI-II, 29% (11) met criteria for at least mild clinical depression, with 7/11 meeting criteria for moderate or severe depression. Only 1 of these 11 caregivers agreed to receive mental health resources
- There was no significant association between BDI-II scores and patient comorbidities or caregiver insurance, age, or gender
- Caregivers who were not married were more likely to score having at least mild clinical depression per their BDI-II score
- Non-respondents had a significantly higher number of patients with individual comorbidities compared to respondents
- Caregivers who responded to the survey were more likely to be caring for patients with a pulmonary comorbidity

Demographic information and breakdown of BDI-II score results in survey respondents

Characteristic	n	Minimal	Mild	Moderate	Severe	p-value
		n = 27	n = 4	n = 6	n = 1	
Age						0.690
	18-25	2 (1 (50))	0 (0)	1 (50)	0 (0)	
	25-34	20 (15 (75))	2 (10)	2 (10)	1 (5)	
	35-44	10 (7 (70))	2 (20)	1 (10)	0 (0)	
	45-55	5 (3 (60))	0 (0)	2 (40)	0 (0)	
	>55	1 (1 (100))	0 (0)	0 (0)	0 (0)	
Gender						0.501
	Male	2 (1 (50))	0 (0)	1 (50)	0 (0)	
	Female	36 (26 (72.2))	4 (11.1)	5 (13.9)	1 (2.8)	
Race						0.021
	White	29 (23 (79.3))	1 (3.5)	5 (17.2)	0 (0)	
	Black	5 (2 (40))	2 (40)	0 (0)	1 (20)	
	Latino	4 (2 (50))	1 (25)	1 (25)	0 (0)	

Summary/Conclusion

Nearly 1/3 of our pediatric tracheostomy caregivers had some degree of clinical depression based on BDI-II scores. To our knowledge, this is the first study assessing rates of depression within this caregiver cohort. Based on our findings, these caregivers' psychosocial needs may benefit from further exploration to enhance available supportive resources. It is imperative that patients and caregivers who are part of vulnerable populations have access to sources of support emotionally, financially, and physically when navigating long term tracheostomy care. Further studies aim to investigate these risk factors in non-respondents to identify if these caregivers are faced with different or more pronounced barriers to care, which may impact their ability to respond to the survey. Additionally, larger sample sizes of underrepresented cohorts in this study may elucidate differences between demographic groups and BDI-II scores across these caregivers.

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