

# Caregivers of Children With Special Healthcare Needs: Exploring the Relationships Between Parental Caregiving of CSHCN and the Use of Anti-Depressants

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## Background

Parent caregivers of children with special healthcare needs (CCSHCN) undergo constant daily stressors due to the ongoing medically technological and emotional needs of their children who they provide daily care for. Since their children's medical needs are typically the parent caregivers' main focus of concern, this often leads to the caregivers overlooking their own personal needs. Stress as a result of caregiving has been said to cause emotional problems, behavioral issues, and physical illnesses including depression, fatigue, and sleep disturbance, which overall leads to a decreased quality of life (Lopes-Júnior, 2022). Caregiver burden has also been negatively linked to other areas such as work-life balance (Stevens, 2024). But although a recent systematic review has suggested that greater complexity of a pediatric patient's care needs may be associated with worst caregiver wellbeing (Lopes-Júnior, 2022), there is not an adequate amount of research that more specifically investigates the association between the complexity of a patient's care needs and the coping behaviors of caregivers. antidepressants in this population.

## Purpose

*In this study, we aimed to:*

1. Examine the differences in the use of antidepressants in parental caregivers of CSHCN and those with healthy, developing children
2. Explore the relationships between parental demographics, self-care, depression, stress, anxiety and the use of antidepressants in parental caregivers of CSHCN
3. Examine if negative affects or the use of antidepressants increased from the pre-pandemic period

## Methods

A longitudinal study was conducted with a convenience sample of 120 parent caregivers who self-reported the following via questionnaires :

1. Diagnosed Mood disorders
2. Antidepressants used
3. Sociodemographic information
4. Completed the Depression, Stress, and Anxiety Scale (DASS)
5. Completed the Mindful Self-care Scale (MSCS) questionnaires.

## Analysis of Statistics

**Aim #1:** Descriptive Statistics were used to summarize participant characteristics

**Aim #2:** Chi-square,  $\chi^2$ ; ANOVA, independent-samples Kruskal-Wallis U test were used to compare between group differences on demographic data.

**Aim#3:** Repeated Measures ANOVA was used to analyze differences between groups and change over time.

## Results

### Results for Aim #1

Tests of Between-Subjects Effects							
Transformed Variable:							
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	AnxietySS	2693.125	1	2693.125	42.008	0.000	0.420
	StressSS	15034.155	1	15034.155	262.066	0.000	0.819
	DepressionSS	2888.229	1	2888.229	76.764	0.000	0.570
	DASSTL	52901.211	1	52901.211	143.444	0.000	0.712
Group_A	AnxietySS	553.725	1	553.725	8.637	0.005	0.130
	StressSS	293.088	1	293.088	5.109	0.028	0.081
	DepressionSS	253.562	1	253.562	6.739	0.012	0.104
	DASSTL	2846.211	1	2846.211	7.718	0.007	0.117
Error	AnxietySS	3718.366	58	64.110			
	StressSS	3327.337	58	57.368			
	DepressionSS	2182.238	58	37.625			
	DASSTL	21390.081	58	368.794			

- A significant difference in scores pertaining to anxiety, stress and depression were observed between the control group (caregivers of healthy, developing children) and the variable group (CCSHCN), as highlighted in *yellow*.
- Partial Eta Squared ( $\eta^2$ ) measuring the effect size was *moderate* for anxiety, stress, and depression.

### Results for Aim #2

The following demographics were cross-tabulated in order to measure for correlation, mainly focusing on their relationship with mood disorder as an assumed association with anti-depressant use:

- Gender, marital status, education level, occupational status, ethnicity, relationship (mother or father), and income.

Through bivariate analysis, association was assessed based on Pearson's correlation coefficient (r) and significance (p-value, Sig. 2-tailed). The results are as follows:

- Education level was inversely correlated with mood disorders (sig.=0.034), meaning that those with higher education were less likely to have a mood disorder
- No further significant correlations existed among the remaining demographics and mood disorders.

### Results for Aim #3

Tests of Within-Subjects Effects							
Measure:							
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Time	Sphericity Assumed	0.267	1	0.267	5.737	0.020	0.090
	Greenhouse-Geisser	0.267	1.000	0.267	5.737	0.020	0.090
	Huynh-Feldt	0.267	1.000	0.267	5.737	0.020	0.090
	Lower-bound	0.267	1.000	0.267	5.737	0.020	0.090
Time * Group_A	Sphericity Assumed	0.000	1	0.000	0.008	0.930	0.000
	Greenhouse-Geisser	0.000	1.000	0.000	0.008	0.930	0.000
	Huynh-Feldt	0.000	1.000	0.000	0.008	0.930	0.000
	Lower-bound	0.000	1.000	0.000	0.008	0.930	0.000
Error(Time)	Sphericity Assumed	2.700	58	0.047			
	Greenhouse-Geisser	2.700	58.000	0.047			
	Huynh-Feldt	2.700	58.000	0.047			
	Lower-bound	2.700	58.000	0.047			

- Significant change over time occurred in both groups (yellow sig.),
- However, the changes observed were *not significantly different* (orange sig.) between the control group (caregivers of healthy children) and the variable group (CCSHCN)

## Discussion and Conclusions

### Aim #1

- The significance values (as highlighted in yellow) all fall under the value of 0.05, which means that the differences observed in the control and variable groups were unlikely to have happened simply by chance.
- Since stress, depression, and DASS scores are significantly different between the two groups, this suggests that parental caregivers of CSHCN experience higher levels of stress, depression, and overall anxiety compared to caregivers of healthy children.
- The effect sizes (Partial Eta Squared values) indicate moderate effects, meaning these differences are meaningful in real-world contexts.

### Aim #2

- The bivariate analysis showed that higher education was inversely correlated with mood disorders (p = 0.034). This suggests that individuals with higher levels of education may have better coping mechanisms, access to resources, or other protective factors that reduce the likelihood of mood disorders.
- However, no statistically significant correlations were found between mood disorders and other demographic variables, including gender, marital status, occupational status, ethnicity, relationship to the child (mother or father), and income. These findings suggest that in this sample, these factors do not play a significant role in the development of mood disorders, or that their effects may be more nuanced and influenced by other unmeasured variables.

### Aim #3

- Although significant changes were observed over time in both groups, the lack of a significant difference between the control and variable groups suggests that the pandemic's impact on negative affects or antidepressant use was similar across caregivers of healthy children and children with special healthcare needs. This may indicate that broader societal factors, such as stress and uncertainty during the pandemic, affected both groups similarly. Future research should explore other factors, such as coping mechanisms or mental health history, to better understand the observed trends.

## Acknowledgements

We would like to thank my co-mentees for their support, as well as University Honors, UROP, and the Florida State University College of Nursing for their resources and support.

## References

