Differences in Patient-Reported Challenges & Outcomes Between Pediatric and Adult Solid Organ Transplant Recipients

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INTRODUCTION

- Immunosuppressive therapy is essential for solid organ transplant (SOT) survival but often leads to substantial side effect and self-management burdens.
- These challenges may vary significantly between pediatric and adult recipients, yet data directly comparing these populations are limited.
- **Aim:** Compare pediatric and adult transplant experiences across five domains: *side effect burden*, *health-related QoL*, *treatment burden/self-management*, *medical self-efficacy*, and *adherence*

METHODOLOGY

- **Study design:** Sub-analysis of a multinational, cross-sectional web-based survey commissioned by the American Society of Transplantation (AST)
- **Population:** Pediatric (≤18 years) and adult SOT recipients across the U.S. and Canada
- **Data collection and validation:** Survey distributed from June 2023-September 2024 and screened using quality checks
- **Statistical Analyses:** Primarily univariate comparisons, such as Student's T-test, chi square, or Fisher's exact test

RESULTS

Table 1. Study population

	Pediatric	Adults
Number of respondents	548 (5.4%), 58.2% Male*, 73.9% White	9,543 (94.6%), 50.1% Female*, 79.3% White
Mean age (years)	12.1 ± 5.0*	49.0 ± 16.5*
Time since transplant (years)	3.9 ± 3.2*	6.6 ± 6.9*

*Indicates p-value <0.001

RESULTS

Table 2. Mean immunosuppression side effect frequency stratified by adults and pediatrics

	Mean Frequency Scale		
Side effect	Adult	Peds	p-value
Tremor/jitteriness	3.7 ± 0.9	3.3 ± 1.1	<0.001
Insomnia	3.8 ± 0.8	3.5 ± 0.8	<0.001
Poor vision	3.8 ± 0.9	3.3 ± 1.0	<0.001
Fatigue	3.9 ± 0.8	3.4 ± 0.8	<0.001
Chronic pain	4.1 ± 0.9	3.3 ± 0.9	<0.001
Muscle weakness	3.9 ± 0.8	3.5 ± 1.1	<0.001
Low libido	4.0 ± 0.9	3.4 ± 1.3	<0.001
Impotence/Infertility	3.9 ± 1.1	3.1 ± 1.2	<0.001
Weight Gain	4.0 ± 0.84	3.5 ± 1.2	<0.001
Hair loss	4.0 ± 0.9	3.3 ± 1.0	<0.001
Brittle skin	4.3 ± 0.8	3.3 ± 1.1	<0.001

Table 3. Mean medication adherence stratified by adults and peds

Measure	Adult	Peds	p-value
Know how to take meds	4.3 ± 1.1	3.9 ± 1.0	<0.001
Understand why taking meds	4.4 ± 1.0	3.8 ± 1.1	<0.001
Believe meds are working	4.3 ± 1.0	3.9 ± 1.0	<0.001
Take meds as recommended	4.4 ± 0.9	3.9 ± 1.1	<0.001
Remember to take meds	4.4 ± 0.9	3.9 ± 1.1	<0.001
Did not take meds due to side effects	1.8 ± 1.2	2.3 ± 1.3	<0.001

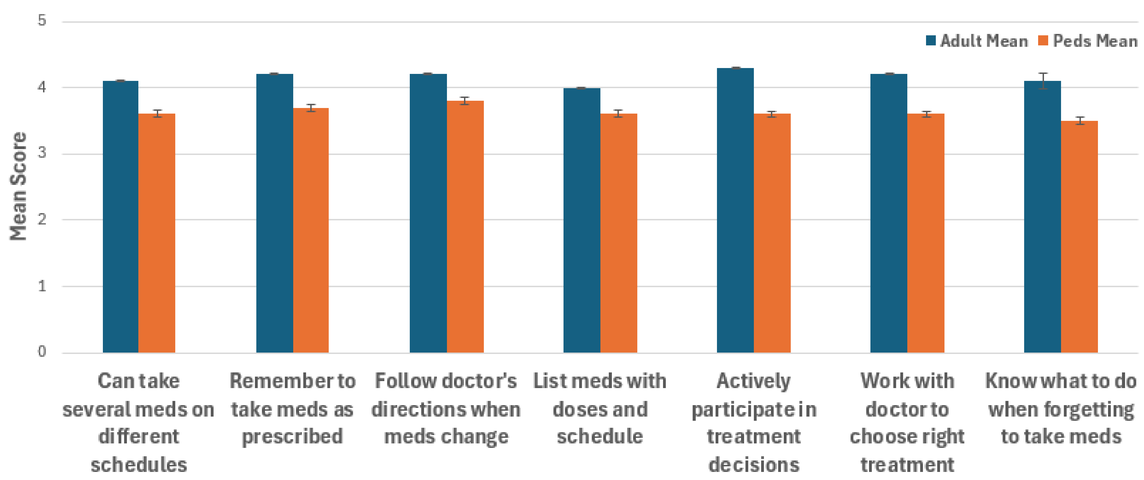

Figure 1. Mean medication self-efficacy reported by adult and pediatric survey participants

Table 4. Mean patient experience with treatment burden & self-management stratified by adults and peds

Measure	Adult	Peds	p-value
Schedule and keep track of medical appointments	2.1 ± 1.4	2.9 ± 1.4	<0.001
Problems managing appointments with different healthcare providers	2.2 ± 1.3	2.8 ± 1.4	<0.001
Problem to monitor health conditions	2.2 ± 1.3	2.8 ± 1.4	<0.001
Bothered by feeling dependent on others for healthcare needs	2.7 ± 1.4	3.0 ± 1.4	<0.001
Problems getting appointments that are convenient	2.3 ± 1.4	2.9 ± 1.4	<0.001
How much self-care interfered with school or work	2.7 ± 1.4	3.2 ± 1.3	<0.001
How much self-care interfered with family activities	2.6 ± 1.3	3.0 ± 1.3	<0.001
How much self-care interfered with daily activities	2.7 ± 1.3	3.1 ± 1.3	<0.001
How much self-care interfered with hobbies or leisure activities	2.7 ± 1.3	3.1 ± 1.3	<0.001
How much self-care interfered with ability to travel for work or vacation	2.8 ± 1.4	3.1 ± 1.3	<0.001
Concerned transplant is losing function	2.6 ± 1.5	2.9 ± 1.4	<0.001

RESULTS

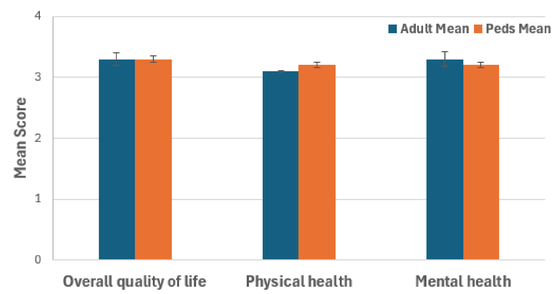

Figure 2. Mean quality of life outcomes reported by adult and pediatric survey participants

CONCLUSIONS

- Adults reported **higher frequency** and **impact** of physical side effects such as *brittle skin*, *chronic pain*, and *fatigue* than pediatric participants.
- Adults rated *medication self-efficacy* and *adherence* **higher** than pediatric participants
- Pediatric participants reported **greater disruption** to school, family, and daily routines despite lower overall symptom burden
- Both adult and pediatric participants reported post-transplant health-related quality of life similarly
- Future implications:
  - Incorporate patient-reported outcomes as key endpoints in clinical trials and routine transplant care
  - Foster collaboration across pediatric and adult transplant teams to ensure continuity and support across the lifespan

DISCLOSURES

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