



PURPOSE

Examine the relationship between symptom severity and health-related and diagnosis-specific QoL in children with urinary incontinence (UI).

BACKGROUND

- Previous research has demonstrated a relationship between UI and poor quality of life (QoL).¹
- Urinary Incontinence: The release of urine at minimum once weekly in children greater than 5 years old.¹
- Quality of Life (QoL): "An individual's perception of their position in their life in the context of culture in which they live and relation to their goals, expectations, standards, and concerns."²

METHODS

Subjects:

- Demographics:
 - 5 Females, 1 Male
- Selection:
 - Sample of Convenience
 - Subjects were recruited at a pediatric specialty clinic where they were already receiving conservative treatment for their daytime urinary incontinence.
 - Inclusion Criteria:
 - English Speaking
 - Seeking conservative treatment for daytime UI
 - 6-16 years of age
 - UI with or without constipation or encopresis
 - Exclusion Criteria:
 - Only experiencing nocturnal enuresis
 - Neurogenic bladder

Instruments:

KINDLr³: Pediatric Health Related QoL

Dysfunctional Voiding and Incontinence Symptom Scale (DVAISS)⁴: UI Symptomology; Symptomatic Score ≥ 8.5 .

Pediatric Incontinence Questionnaire (PinQ)⁵: Diagnosis Specific Emotional Impact

DATA ANALYSIS

- SPSS Version 28 to run all data analyses with alpha set at $p \geq .05$.
- Descriptive statistics were used to analyze the mean and SD of data recorded from the questionnaires, as well as group demographics.
- A Wilcoxon Rank test was used to determine the agreement or differences between parent and child report on the KINDL.
- A Pearson Correlation test was used to analyze the relationship between age and child KINDL scores.
- A Multiple linear regression was used to test if symptom severity (DVAISS) and age significantly predicted diagnosis-specific QoL (PinQ).

RESULTS

- All participants were symptomatic for UI indicated by DVAISS scores ≥ 8.5 .⁴ (Table 1)
- All parents (N=6) reported higher emotional well-being for their child than child self-report (Table 2)
- Parent mean values for emotional well-being scores were significantly higher than child self-report, with a large effect size ($p < .01$, $|d|=1.65$; Table 3)
- The age of the child at first episode and their reported emotional well-being (KINDL), were strongly and negatively related ($r = -0.92$, $p = .01$).
- Neither symptom severity nor age predicted diagnosis-specific quality of life reported in the PinQ ($F(2,3) = 0.30$, $p = .76$, $R^2 = 1.67$).

CONCLUSIONS

- UI may negatively affect a child socially, emotionally, and behaviorally.
- A cross-sectional study was conducted to determine pre-intervention QoL in pediatric patients being treated for UI.
- The findings suggested that only the emotional well-being subscale of the KINDLr was significant between parent and child reports.
- No other subscales of the KINDLr were significantly different between parent and child reports.

DISCUSSION

Clinical Relevance:

- Patients seeking treatment for pediatric UI may also benefit from consultation with a clinical psychologist to address their emotional well-being needs.

Limitations:

- Small sample size
- Unable to perform long term follow-up
- Population selection
- All subjects included had supportive parents seeking treatment

Future Research:

- Future research would be valuable to compare pre- intervention data to post-intervention data to see if treatment improves QoL in children experiencing daytime UI.

Table 1: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
Child KINDLr Total Score	52.08%	76.04%	62.67%	9.85%
Parent KINDLr Total Score	51.04%	72.92%	64.32%	8.11%
DVAISS Total Score	11.00	28.00	16.50	6.66
PinQ Total Score	37.00	82.00	55.20	21.22

KINDLr mean score reference values for healthy 7-13 year-olds: girls=76.83%; boys=76.67%

Table 2: Paired Parent and Child Emotional Well-Being (EWB) Scores

	Pair 1	Pair 2	Pair 3	Pair 4	Pair 5	Pair 6
Child KINDLr EWB Score	43.75	56.25	31.25	62.50	62.50	62.50
Parent KINDLr EWB Score	50.00	87.50	56.25	75.00	68.75	87.50

Table 3: Paired T-test Comparing Child Emotional Well-Being (EWB) Scores to Parent EWB Scores

	Mean (SD)	Minimum	Maximum
Child KINDLr EWB	53.13% (12.96%)	31.25%	62.50%
Parent KINDLr EWB	70.83% (15.65)*	50.00%	87.50%

*Paired t-test: $t(5) = 4.029$, $P < .01$, $|d|=1.65$ (large effect size); Pearson correlation: $r = 0.73$ ($P = 0.05$); EWB - Emotional Well-Being; * $p < .05$*