

Don't worry, be flexible: Change in parent psychological flexibility predicts well-being in intensive interdisciplinary pediatric chronic pain treatment

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Abstract

This pre-posttest clinical study found parents who participated with their child in an intensive interdisciplinary pain treatment program had lower levels of depression and better mental health-related quality of life at three-month follow-up. Change in psychological flexibility predicted better parent well-being at follow-up.

Background

- Parents of youth with chronic pain have higher rates of depression and anxiety (Palermo et al., 2014) and chronic pain themselves (Beveridge, Neville, Wilson, & Noel, 2018).
- Pediatric pain programs with interventions to shift parenting styles have been found to improve child functioning (Levy et al., 2017).
- However, few explicitly assess or address parent mental health (Hechler et al., 2015).
- Shifting cognitive processes may be key to improving parent well-being in the context of pediatric pain, specifically pain catastrophizing and psychological flexibility.
- Parent pain catastrophizing has been associated with overprotective parenting responses and poorer child functioning (Sieberg, Smith, White, Manganello, Sethna, & Logan, 2017).
- Parent psychological flexibility has been linked to improved pain acceptance in their children (Kemani et al., 2018) and decreased parent stress related to their child's illness (Burke et al., 2014).

Study Aim

This study aims to evaluate the influence of a pediatric intensive interdisciplinary pain treatment program (IIPT) on parents of participating youth. Our hypotheses included:

1. Parents would show improved mental health and health-related quality of life at 3-month follow-up.
2. Decreased parent pain catastrophizing and increased parent psychological flexibility would predict better parent mental health at follow-up.

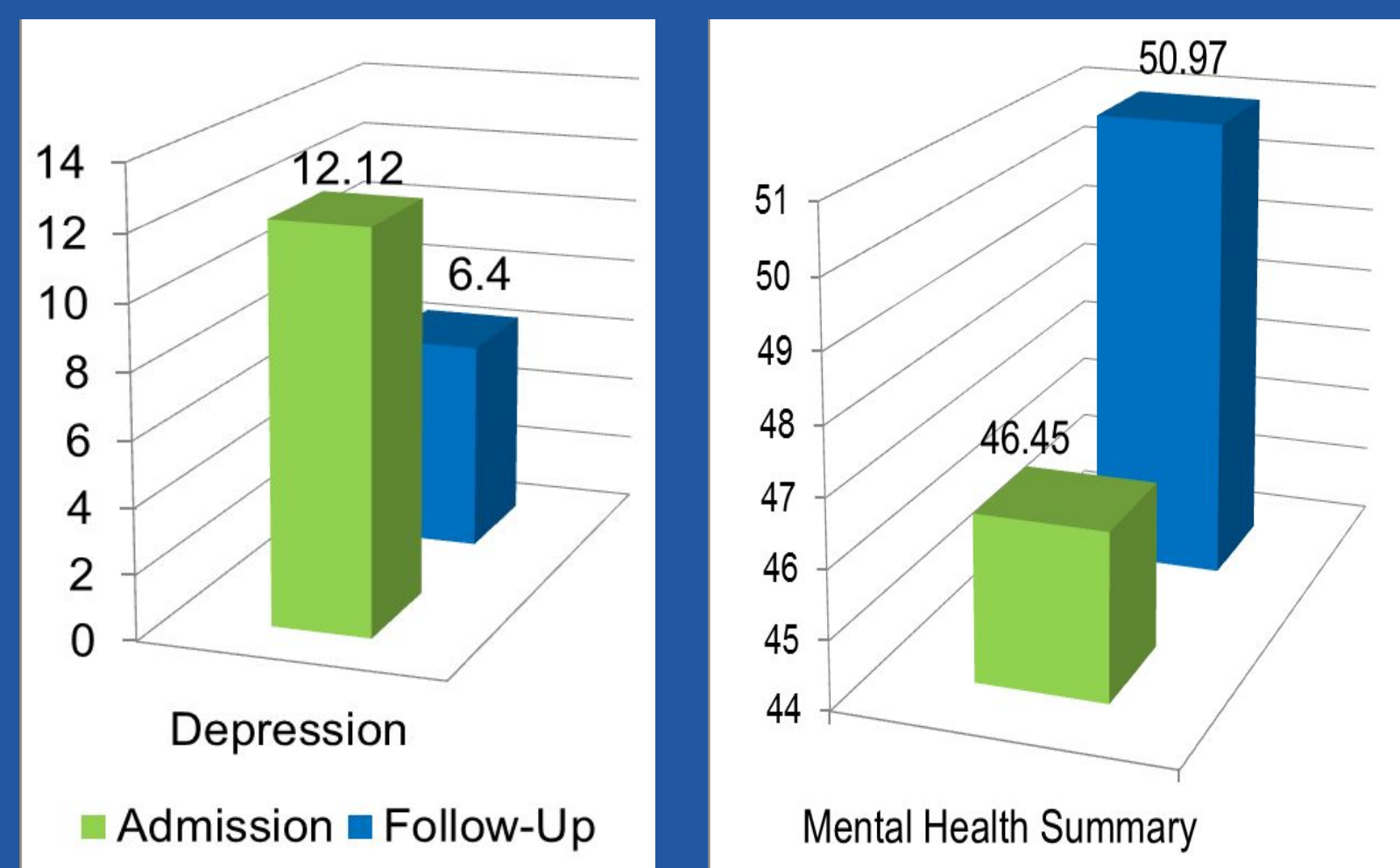
Methods

- IRB-approved pre- and posttest clinical study at a 15-day pediatric IIPT in a Midwestern tertiary medical center.
- The IIPT required at least one caregiver to participate with their child.
 - 41+ hours of structured caregiver programming grounded in CBT and ACT.
 - Including 3, 2-hour parent-only psychoeducation groups per week and daily family psychotherapy groups on a range of topics (e.g. family communication, reintegrating to home and school, relapse prevention).

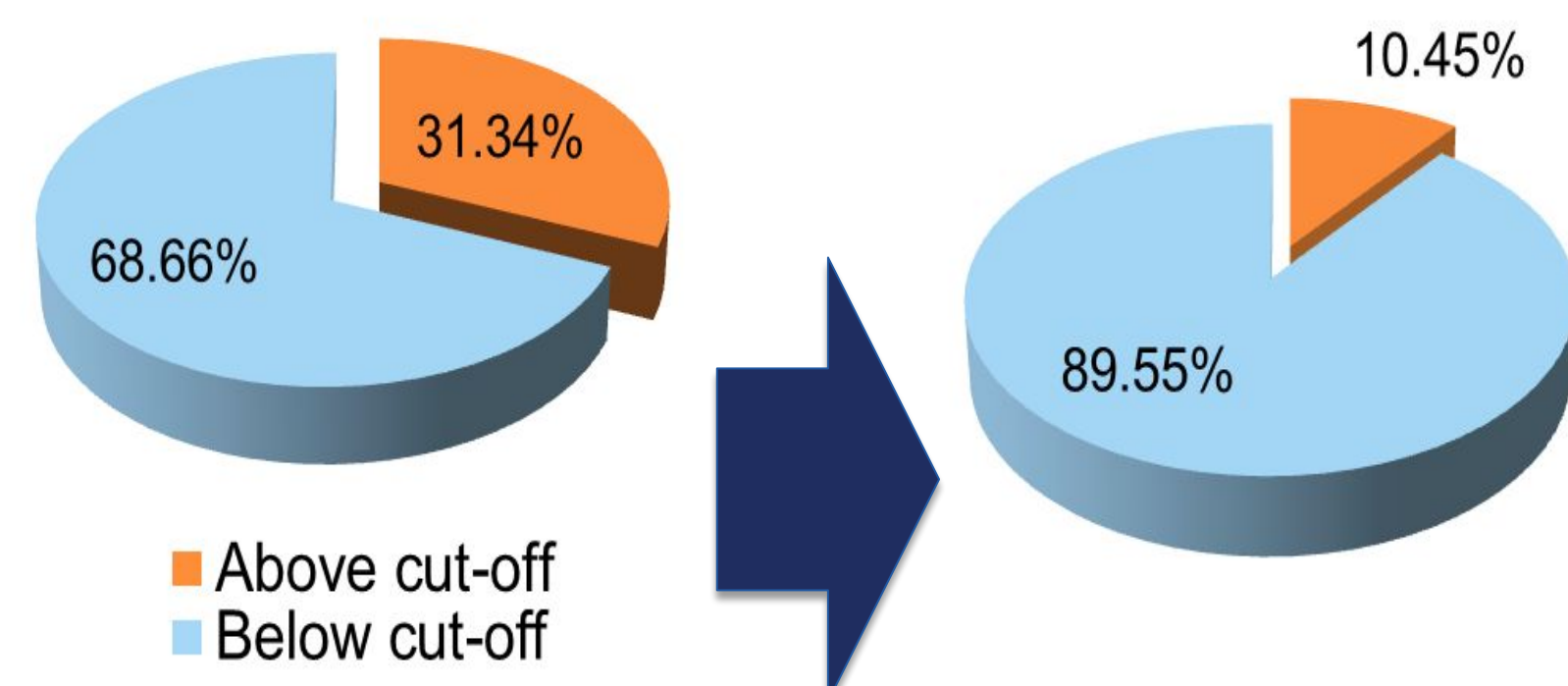
Methods (cont'd)

- Patients and parents completed measures at admission and three-month follow-up.
 - Youth functioning (FDI)
 - Parent depression (CESD), health-related quality of life (SF-36), pain catastrophizing (PCSP), and psychological flexibility (PPFQ), and number of chronic health symptoms.
- Statistical analyses using SPSS v. 25
 - **Paired-sample t-tests** to examine change in parent depression and mental health-related quality of life.
 - **Hierarchical multiple regression** analyses using residualized change scores to understand the association between pain catastrophizing and psychological flexibility and parent mental health at follow-up.
- Out of 598 patients who participated in the IIPT between 2015-2017, 268 returned follow-up measures.

Change in Parent Mental Health Admission to Follow-up (CES-D and SF-36)



Parents Above Clinical Depression Cut-Off Admission to Follow-Up



Results

- **Parents showed lower depression and improved mental health-related quality of life at follow-up.**
 - Depression: $t(267) = 9.75, p < .001, d = .63$;
 - Mental health summary: $t(262) = -6.89, p < .001, d = .46$.
- **Change in parent pain catastrophizing was not a significant predictor of mental health at follow-up...**
- **... But change in psychological flexibility was.**
 - Depression: $F(7, 245) = 17.60, p < .001, R^2 = .33$
 - Mental Health: $F(7, 244) = 14.78, p < .001, R^2 = .30$

Hierarchical Regression of Parent Mental Health-Related Quality of Life at 3 Months

Predictor	B [95% CI]	SE(B)	Beta	R ²
Step 1				
Mental Health admit	.33 [.23, .42]	.05	.40**	.21**
Parent symptoms	-.76 [-1.22, -.30]	.24	-.18**	
Step 2				
PCSP at admit	.02 [-.13, .18]	.08	.02	.01
PPFQ at admit	.05 [-.04, .15]	.05	.10	
Step 3				
Child FDI change	.03 [-.10, .16]	.07	.03	.08**
PCSP change	-.03 [-.16, .09]	.06	-.03	
PPFQ change	.19 [.10, .28]	.04	.28**	

* $p < .05$, ** $p < .008$.

Discussion

- These findings suggest pediatric IIPTs that include ACT-based caregiver training may have a positive influence not only on the identified patient but also their parents. This aligns with previous IIPT research (e.g. Guite et al., 2018).
- Improvement in child functioning did not predict parent mental health at follow-up, indicating parent mental health is likely more connected to how caregivers view their child's pain rather than the pain itself.
- Caregivers are capable of learning to be more present in the moment and accepting of their child's distress (Wallace, Woodford, & Connelly, 2016).
- Fostering increased parent psychological flexibility may be especially important for supporting parent resilience in the context of pediatric chronic pain.

Conclusions

Through learning to accept the discomfort of witnessing their child's pain and choosing to continue to live their lives fully and in alignment with their values, parents of youth with chronic pain can experience improved mental health for themselves while also shifting the cycle of pain toward improved functioning and mental health for their children.

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