Golisano Children's Hospital Amplified Musculoskeletal Pain Program (GCHAMPP): Patient Demographics and Relationship Between Parent Psychological Flexibility and Treatment Completion in a Pediatric Population

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Background

Amplified Musculoskeletal Pain Syndrome (AMPS) encompasses a spectrum of chronic pediatric musculoskeletal pain manifestations, with the commonality being central and/or peripheral sensory pain amplification (Hoffart & Wallace, 2014).

- Caused approximately 20% of the time by injury and **80% by psychological stress** as either the initial cause or a complicating factor with other causes (Woo et al., 2007).
- **Common co-occurring conditions**: disordered sleep and joint hypermobility, chronic fatigue, cognitive and mood difficulties, headaches, irritable bowel syndrome, etc..
- In pediatric pain, **parental psychological flexibility** is defined as "the parent's willingness to experience distress related to the child's pain, **in the service of long-term values** and **related behavioral goals** for both parent and child" (Wallace et al., 2015).
- Higher scores on the Parent Psychological Flexibility Questionnaire (PPFQ) associated with **increased adolescent-related pain acceptance, lower functional disability, and fewer depressive symptoms** (Wallace et al., 2015)

Psychological flexibility targeted by GCHAMPP treatment:
1) Not assessing for or talking about pain during PT and OT appointments; emphasis is on **functional engagement.**
2) Parent involvement only in first PT/OT appointments.
3) ACT and CBT approach to pain in therapy with parents *invited.*

- Parent involvement in therapy: focus on supporting the child and **changing response to their child's distress** (e.g., not doing things *for* child, but instead encouraging child to use their coping skills to do things themselves).
- When the above a challenge for patient/parent, more family sessions encouraged with specific family interventions aimed to **disrupt the parent-child cycle of accommodation** dynamic pattern.

Introduction

University of Rochester Department of Pediatrics, Pediatric Rheumatology Division at Golisano Children's Hospital, provides diagnosis and treatment of children and adolescents with AMPS through **the Amplified Musculoskeletal Pain Program (GCHAMPP)**. At GCHAMPP, in addition to being evaluated by a physician within Rheumatology, treatment includes **occupational therapy, physical therapy, and individual and family pain counseling/therapy** aimed towards pain desensitization and acceptance.

Purpose of Study

1) Identify descriptive data of the participants of GCHAMPP, including: age, gender identity, comorbid medical and psychiatric diagnoses to better understand needs of population.
2) Identify the mean, median, and mode PPFQ score of parents whose children diagnosed with AMPS by GCHAMPP.
3) Disseminate descriptive data to treatment team to educate, as well as inform future research and program development.

Methodology

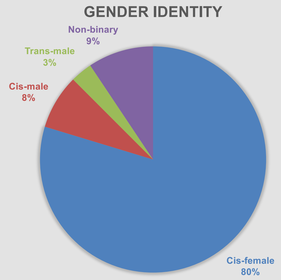
- **Archival review** of medical record charts (2020-2022) of 64 patients who were given AMPS diagnosis and recommended for program. **Collected** descriptive data, PPFQ scores, whether patient completed or did not complete the program.
- Treatment completion: **engaged in all three disciplines at GCHAMPP within an 8-week period.** Patients who had insurance restrictions that caused them to need to end one or more disciplines early were included.

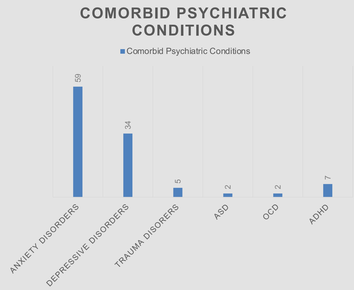
PPFQ-revised

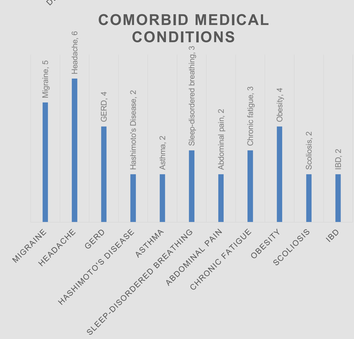
- **17-item PPFQ-revised** with anchors 0-6 (Never True to Always True); score ceiling = 102.
- **Subscales** suggesting Values-Based Action, Pain Acceptance, Emotional Acceptance, and Pain Willingness. **Shown to correlate significantly with adolescent-rated pain acceptance, functional disability, and depression** (Wallace et al., 2015).

Results

Descriptive Data







PPFQ (completers and non-completers):

- Mean = 57
- Median = 57.073
- Mode: 78, 57, 58
- Range: 22-86

Age (completers and non-completers):

- Mean = 15
- Median = 16
- Mode: 16
- Range: 11-18

GCHAMPP non-completers: 12

- Referred for mental health needs = 3
- Pain Psychology only = 1
- Ended PT/OT (not insurance) = 1
- Counseling outside program = 1
- Reduced treatment buy-in = 1
- PT/OT done outside program = 1
- Non-specific explanation = 4

***Those who could not complete full program *specifically* due to insurance barrier (lack of PT/OT coverage) NOT included as a non-completer.**

Discussion

Patients presenting to GCHAMPP with AMPS diagnosis

- **Cis-females** (80%), aligned with established prevalence rates
- **Trans and non-binary identified** (12%)
- Comorbid **anxiety** (92%) and/or **depressive disorders** (53%)
- Comorbid **headache** and/or **migraine** (17%)
- Approximately **81%** of patients complete full programming.

- **Barriers to treatment completion**: **COVID-related** - PT/OT closer to home (2); **Insurance** – PT/OT not fully covered (3); **Priority mental health** needs necessitating transfer of care (3).

- **PPFQ:** Those who *did not* complete program (those who declined treatment *or* did not complete program) and completed PPFQ, Mean = 59.4, roughly **3 points higher** than those who *did* complete full program (Mean = 56.2). → **Not enough data to draw conclusions or conduct statistical analyses.**
- However, *preliminary* evidence that psychological flexibility associated with **greater willingness to engage in treatment.**

Future Directions

- Disseminate patient descriptive data to Pediatric Rheumatology.
- Education, training, and research about gender diverse population to inform treatment recommendations and program development for youth with **chronic pain and gender dysphoria**.
- Examine pre- to –post-treatment outcomes on common comorbid conditions & advocate for PT and OT insurance coverage.
- Establish treatment recommendations for youth presenting to GCHAMPP with acute mental health needs (e.g., SI, psychosis).

- PPFQ: Examine changes in ***PPFQ score pre- to post- treatment*** and correlation(s) with number of PT, OT, and therapy appointments to better identify if parental psychological flexibility is a ***predictor of and/or outcome of*** treatment completion →
- Utilize findings to inform parent psychoeducation and involvement in GCHAMPP programming.

Acknowledgements

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