



Pediatric Amplified Musculoskeletal Pain Syndrome and Body Dissatisfaction

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Background

- **Amplified Musculoskeletal Pain Syndrome (AMPS)** is a condition that affects approximately 1 in 4 children (Anthony & Schanberg, 2001; King et al., 2011; Perquin et al., 2000), and is found to be caused by injury, illness and/or psychological stress (Woo et al., 2007).
 - **The Golisano Children's Hospital Amplified Musculoskeletal Pain Program (GCHAMPP)** includes being evaluated within Rheumatology, treatment including occupational therapy, physical therapy, individual and family counseling/therapy, and collaboration with other systems.
- **Gender Dysphoria** is an incongruence between one's affirmed gender and the gender assigned at birth (APA, 2013) with recent prevalence rates ranging from 0.5 to 1.3% and an overall increase in people accessing gender clinic/resources (Zucker, 2017).
 - Importance of understanding how to treat these patients (Sayeem et al., 2021).
- **Eating disorders** are characterized by disturbances in eating behaviors, emotions, and thoughts (APA, 2013).
 - Eating disorders tend to be detected later in patients with chronic pain, which likely make it more difficult to treat both conditions (Sim et al., 2017).
 - Chronic pain is often related to poor body image, and people with pain often report appearance concerns (Sundermann et al., 2018).
- Only one study to date has accounted for patients with co-occurring AMPS and gender dysphoria. No studies have investigated the role of body image/eating disorders in AMPS.
 - Increased emphasis on recognition of gender dysphoria and co-occurring treatment with their pain may lead to better pain outcomes (Sayeem et al., 2021).
 - Understanding how people cope with pain might improve their overall experience with their body image (Markey et al., 2020).

Purpose:

To better understand unique presentations of youth presenting with AMPS and disorders related to body dissatisfaction.

Methods

A retrospective chart review was conducted on patients who participated in the AMPS program (GCHAMPP) from 2020-2024. GCHAMPP is an interdisciplinary rehabilitation and psychology approach to pediatric pain.

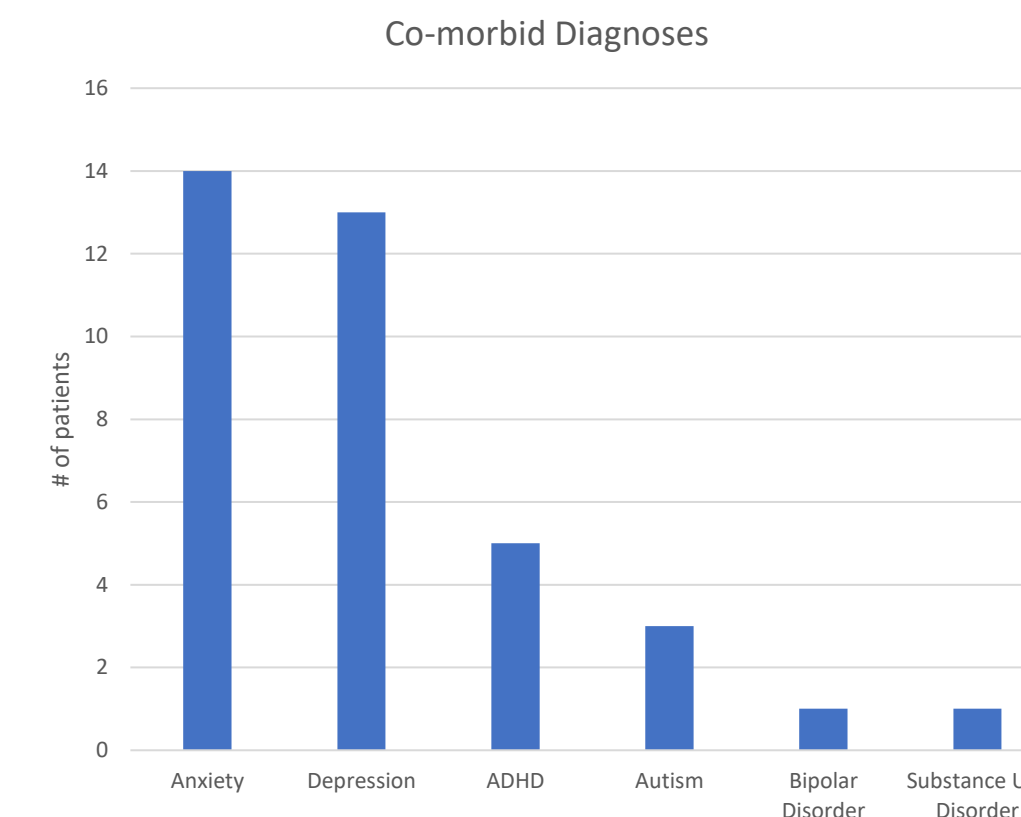
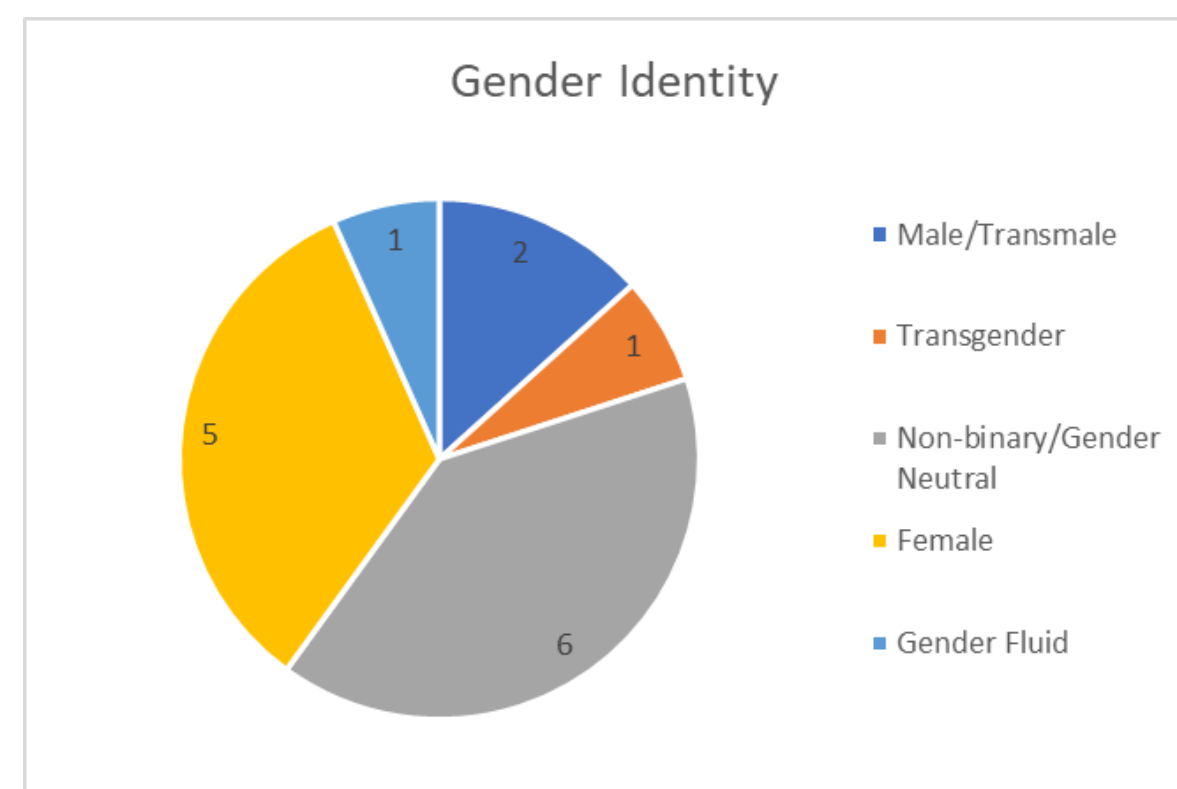
Patients with AMPS were included in review if they either reported body image, eating, and or/gender dysphoria while in the program or if they attended appointments in Adolescent Medicine for the same concerns (n=15).

Information collected from chart review included

- Other psychiatric diagnoses
- Program completion,
- Age admitted to program
- Gender identity
- Functional Disability Inventory (FDI) pre and post-tests (Walker & Greene, 1991)
 - Self-report of child's limitations in psychosocial and physical functioning due to physical health
- Pediatric Symptom Checklist (PSC; Jellinick & Murphy, 1988)
 - Self-report of psychosocial, behavioral, and emotional symptoms in children
- Parent Psychological Flexibility Questionnaire (PPFQ; Burke & Moore, 2015)
 - Targets parental psychological flexibility in pediatric pain

Results

Of the 15 patients identified (80% White, 8% Black, 13% unknown), 3 had eating disorder or body image concerns and 12 presented with gender dysphoria and were admitted to the program between ages 13-18 (m=15.9).



Measure	Average Score	Range in sample	Possible Range
FDI Pre-test	31 (n=12)	19-45	0-60
FDI Post-test	9.3 (n=3)	3-15	0-60
PSC (self-report)	26.9 (n=10)	6-41	0-70
PPFQ	64.7 (n=9)	52-88	0-102

Discussion and Future Directions

- Youth with AMPS and comorbid symptoms of body dissatisfaction present with many comorbid diagnoses and psychosocial problems
- These youth present with limitations in psychosocial and physical functioning due to their chronic pain. and this is more than the norms for youth this age
- Higher psychological flexibility in parents than norms for these youth
- On average, youth with AMPS are below significant cutoff for impairment related to behavioral and emotional symptoms
 - Symptoms that are more distressing to these youth may not be represented on the PSC measure
 - Youth may also be underreporting on this measure because they do not view their pain as behavioral or psychological
- Overall increase in ability to engage in daily tasks for these youth by the end of the AMPS program
- Patients with AMPS may have a higher likelihood of experiencing body related dissatisfaction, and future research is necessary to better understand how this relation might impact treatment
- It is important to continue to engage in research that helps better understand specific strategies, protocols, and interventions that might lead to better pain outcomes
- Importance of continuing to collaborate care with patient's providers, especially Adolescent Medicine team
- More research about these unique populations and how to provide most comprehensive treatment by addressing many concerns
- Qualitative interviews or focus groups to gather more information about the patients' personal experiences

Contact Danielle Scharf (Danielle_scharf@urmc.Rochester.edu) if you would like more information about the project.