

Systematic Review of Non-Pharmacological Persistent Pain Treatments for Youth Ages 6 to 21 with Mental Health Comorbidities: Preliminary Results

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BACKGROUND



11-38% of children in North America experience chronic pain [1]



17-29% also have mental health comorbidities [2]



METHODS

PRISMA DIAGRAM

1. IDENTIFICATION

10808 studies imported for screening

1188 duplicates removed

2. SCREENING

9665 studies screened

9378 studies irrelevant

3. FULL TEXT REVIEW

287 studies screened

274 studies excluded

4. INCLUDED

12 studies included

INCLUSION CRITERIA

- ❖ Ages 6 to 21 years
- ❖ Peer-reviewed
- ❖ Pre-post design
- ❖ Primary data sources
- ❖ Persistent pain and a mental health comorbidity
- ❖ At least one outcome domain recommended by the Pediatric Initiative on Methods, Measurements, and Pain Assessment in Clinical Trials [PedIMMPACT]

EXCLUSION CRITERIA

- ❖ Non-human studies
- ❖ Secondary data sources
- ❖ Older than 21
- ❖ No mental health comorbidity
- ❖ Specifically include neurodevelopmental disorder
- ❖ Only non-pharmacological treatments.
- ❖ Observational studies
- ❖ Acute perioperative or postoperative pain
- ❖ Cancer-related pain

HIGHLIGHTS

- ❖ 1 study used the DSM-5 criteria to assess mental health
- ❖ No distinction between children with mental health comorbidities VS children without.
- ❖ No formal analysis of mental health
- ❖ Large variability between assessment measures
- ❖ Currently, there is no evidence to suggest that non-pharmacological interventions are not effective for children with persistent pain and a comorbid mental health disorder. However, this topic has not been sufficiently been looked at it.

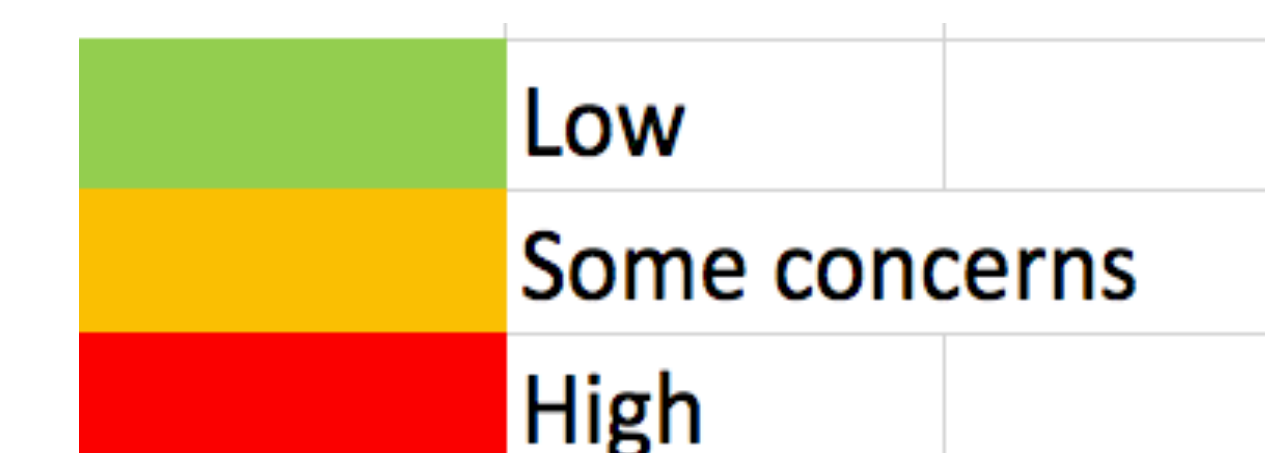
SUGGESTIONS

- ❖ Need for consistent measures criteria to improve replicability.
- ❖ Inclusion of formal assessments of mental health
- ❖ Distinctions between participants with mental health comorbidities, VS participants without
- ❖ Given the Get Up and Go program, there is an opportunity for this type of research to occur at Holland Bloorview.

RESULTS

PAPER	SAMPLE SIZE	AGE	STUDY DESIGN	WAS THERE AN IMPROVEMENT WITH TREATMENT?			RISK OF BIAS DOMAIN				
				MENTAL HEALTH	PAIN INTENSITY	PHYSICAL FUNCTIONNING	D1*	D2-A	D2-B	D3	D4
MANO ET AL (2013)	6 (5F, 1M)	12 to 18 (15)	Mindful based intervention VS Psychoeducation	No	No	Not assessed	Low	Some concerns	High	Low	Low
FANUCCHI ET AL (2009)	70 (31F, 39M)	12 to 13 (12)	Exercise program VS Home exercise	No	Yes*	No	Low	Some concerns	High	Low	Low
PALERMO ET AL (2016)	278 (208F, 70M)	12 to 17 (14.7)	Internet treatment VS Internet education	Yes*	No	Not assessed	Low	Some concerns	High	Low	Low
CUNNINGHAM ET AL (2021)	79 (47F, 30M)	9 to 14 (11.65)	ADAPT VS Treatment as usual	No	No	Not assessed	Low	Some concerns	High	Low	Low
PALERMO ET AL (2020)	143 (120F, 23M)	10 to 17 (14.6)	Webmap internet program VS Treatment as usual	Not reported	No	Not assessed	Low	Some concerns	High	Low	Low
KASHIKAR-ZUCK ET AL (2012)	111 (105F, 6M)	11 to 18 (15)	CBT VS Fibromyalgia education	Yes	Yes	Yes	Low	Some concerns	High	Low	Low
HEATHCOTE ET AL (2018)	23 (20F, 3M)	10 to 18 (13.97)	Attention bias modification VS Placebo VS Waitlist	Yes	Yes	Yes	Low	Some concerns	High	Low	Low
KASHIKAR-ZUCK ET AL (2013)	114 (107F, 7M)	11 to 18 (15.2)	CBT VS Fibromyalgia education	Not reported	Yes	Yes*	Low	Some concerns	High	Low	Low
KASHIKAR-ZUCK ET AL (2018)	40 (36F, 4M)	12 to 18 (15.38)	CBT VS Fibromyalgia integrative training	No	Yes	No	Low	Some concerns	High	Low	Low
STEPHENS ET AL (2008)	30 (22F, 8M)	8 to 18 (12.92)	Aerobics VS Qigong	No	Yes	Yes	Low	Some concerns	High	Low	Low
FLACK ET AL (2018)	126 (90F, 36M)	11 to 17 (14.3)	Introceptive exposure VS Control	Yes	Yes	Not assessed	Low	Some concerns	High	Low	Low
PALERMO ET AL (2009)	48 (35F, 13M)	11 to 17 (14.3)	Internet CBT VS Waitlist	Yes	Yes	Not assessed	Low	Some concerns	High	Low	Low

Domain 1: Risk of bias arising from the randomization process
 Domain 2A: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)
 Domain 2B: Risk of bias due to deviations from the intended interventions (effect of adhering to intervention)
 Domain 3: Missing outcome data
 Domain 4: Risk of bias in measurement of the outcome
 Domain 5: Risk of bias in selection of the reported result



*= Yes, but not in long term follow ups.

