

Massage therapy improves symptom management for youth receiving hematology and oncology care

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A new study from University Hospitals (UH) Connor Whole Health found children, adolescents, and young adults with cancer or sickle cell disease (SCD) treated at a pediatric academic medical center reported clinically significant reductions in pain, stress, and anxiety in response to



massage therapy.

Furthermore, patients with SCD who received <u>massage therapy</u> reported significantly higher symptoms at baseline than patients with hematologic and/or oncologic conditions excluding SCD. The findings from this study were recently published in the journal, *Pediatric Blood & Cancer*, a leading journal focusing on the diagnosis and treatment of youth with hematologic and oncologic conditions.

In this <u>retrospective study</u> conducted between October 2019 and December 2021, a Certified Pediatric Massage Therapist from UH Connor Whole Health provided 3,015 massage therapy sessions to 243 patients across 1,494 encounters at UH Rainbow Babies & Children's Hospital, making this one of the largest investigations of the real-world effectiveness of massage therapy within pediatric hematology and oncology to date.

"The massage therapy program at Rainbow is unique in that we have a certified pediatric massage therapist with strong skills in clinical integration. The massage therapy work does not stand disconnected to the other care received, but rather is an integral part of it. This relationship allows us to see how massage performs in a real-world setting, and how this intervention offers a safe means of providing effective, non-pharmacologic treatment for pain, anxiety, and stress," said David W. Miller, MD, LAc, Medical Director of Pediatric Integrative Medicine at UH Connor Whole Health and co-senior author of the study.

"Hospitals are mandated already to provide non-pharmacologic options, but what these options should include remains poorly defined. The work through Connor Whole Health and Rainbow demonstrates that massage therapy should be integral to clinical services in this domain."



UH Connor Whole Health provides inpatient and outpatient integrative and whole health care for families looking to expand treatment options using evidence-informed strategies that are integrated within the care they receive from other excellent providers inside and outside of UH.

Additionally, UH Connor Whole Health provides a diverse offering of integrative health and medicine modalities, including expressive therapies (e.g., art and <u>music therapy</u>), massage, hypnosis, biofeedback, acupuncture, chiropractic, and integrative medicine consults, that are centered on patients' entire well-being.

In "Massage Therapy for Children, Adolescents, and Young Adults: Clinical Delivery and Effectiveness in Hematology and Oncology," researchers examined the clinical delivery and effectiveness of massage therapy at UH Rainbow Babies & Children's Hospital and compared the effectiveness of massage therapy on pain, stress, and anxiety between children, adolescents, and <u>young adults</u> with SCD as compared to those with hematologic and/or oncologic conditions excluding SCD (the HemOnc group).

"This manuscript shows the power of touch. This can include holding a hand, hugging a parent or child, or a full massage therapy treatment. My role is not only to provide massage but also to provide support through patients' treatment journeys. I am there from diagnosis to remission or to end of life," said Mandy Bartolovich, LMT, CPMT, the massage therapist who provided the services described in the study.

As part of clinical care, Bartolovich assessed patients' self-reported pain, stress, and anxiety on a 0 to 10 scale at the beginning and end of each session and documented these sessions in the electronic health record.

Beyond providing massage therapy treatments, Bartolovich also provided important psychosocial support including conducting assessments of



patients and family members' needs, providing supportive interventions during painful procedures, providing education on stress management techniques, and facilitating communication and collaboration between patients, their families, and the medical team.

"What makes this research unique is the meaningful integration of massage therapy within clinical hematology/oncology care and our ability to collect all our data within the electronic health record, extract it, and analyze it to understand the real-world impact of massage therapy," said Sam Rodgers-Melnick, MPH, MT-BC, first author of the study.

"This research highlights the increased symptom burden that youth with SCD face in the hospital and the significant impact that a single session of massage therapy can have on their symptoms." This study builds upon a recently published study [published in *Integrative Cancer Therapies*] demonstrating the effectiveness of music therapy for adults with hematologic and oncologic conditions as well as the increased symptom burden faced by adults with SCD.

"Beyond the clinical trial, the ability to collect real-world data from <u>clinical practice</u> (also called practice-based research) provides hospital leaders and health systems with access to outcomes that are important to patients," stated Jeffery A. Dusek, Ph.D., Director of Research at UH Connor Whole Health and co-senior author on the study.

Results of the recent study showed that in the combined sample of patients in the SCD and HemOnc groups, clinically significant reductions in pain (2.25 units), stress (2.50 units), and anxiety (2.52 units) were observed. Patients in the SCD group (vs. patients in the HemOnc group) reported significantly higher pre-treatment pain (6.95 vs. 4.46), stress (6.47 vs. 4.58), and anxiety (6.67 vs. 4.59). Additionally, patients in the HemOnc group reported greater mean pain reduction



(2.54 vs. 1.87 units) than patients in the SCD group.

"We have shown that massage therapy is a convenient, non-toxic, and useful adjunct to therapies administered in pediatric hematology/oncology, a population that has to endure a number of complex and sometimes toxic therapies," explained Sanjay P. Ahuja, MD, Clinical Director of Pediatric Hematology/Oncology and a coauthor on the study.

Importantly, massage therapy was both safe and effective for this population that had a high prevalence of conditions including coagulation defects, neutropenia, immune system disorders, and treatment-related pain from intravenous lines and radiation. When conditions such as these are present, Certified Pediatric Massage Therapists like Bartolovich are specially trained to take appropriate precautions to provide massage therapy services to address patients' needs.

More information: Samuel N. Rodgers-Melnick et al, Massage therapy for children, adolescents, and young adults: Clinical delivery and effectiveness in hematology and oncology, *Pediatric Blood & Cancer* (2023). DOI: 10.1002/pbc.30243

Samuel N. Rodgers-Melnick et al, Clinical Delivery and Effectiveness of Music Therapy in Hematology and Oncology: An EMMPIRE Retrospective Study, *Integrative Cancer Therapies* (2022). DOI: 10.1177/15347354221142538

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