

Oncology Patients

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Background

- ❖ Pediatric cancer is any cancer in a patient that is younger than 20 years of age. Each year more than 15,000 cases of cancer is diagnosed in children in the United States. Of these cancers, the most common in pediatrics are leukemia, lymphoma, and brain cancer (CDC, 2018).
- ❖ In the United States, people with cancer take anxiety or depression medication at twice the rate of people who have never had cancer (CDC, 2018).
- ❖ Among children with cancer, research suggests that specific PTSD symptoms occur more frequently than the full spectrum of PTSD symptoms and may affect nearly 75% of youth during or after treatment (Marusak, 2018). These specific PTSD symptoms may include: nightmares or flashbacks, a difficulty in feeling emotions, feeling helpless, feeling distant or cut off from others, and feeling anxious (Marusak, 2018).

Purpose

In pediatric oncology patients, is interactive therapy or creative therapy more effective in relieving stress?

Methods

Inclusion Criteria:

- ❖ Any race or gender
- ❖ Studies that had at least one RN as an author.
- ❖ Studies that were published between 2015 and 2020.
- ❖ Studies that included interactive therapy or creative therapy as an intervention.
- ❖ Studies that had participants of age 20 or younger.

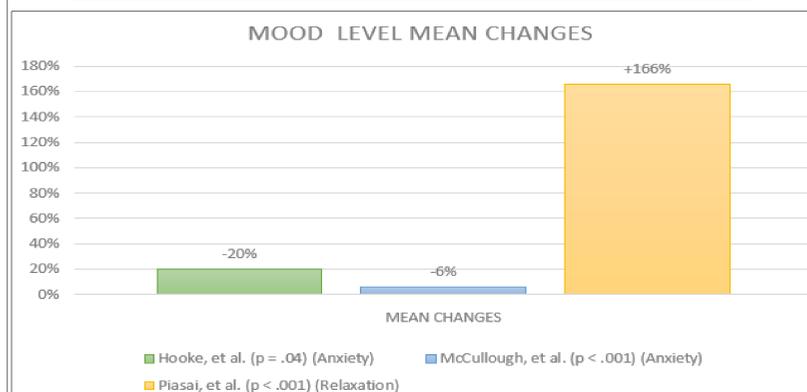
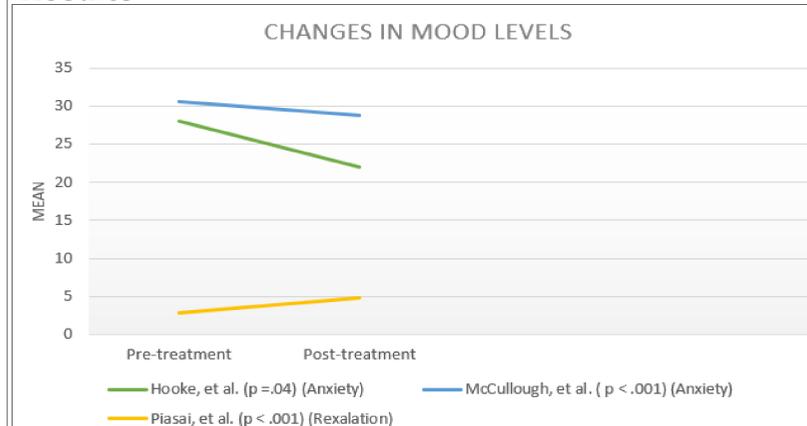
Exclusion Criteria:

- ❖ Studies that only included adults (age 21 and older) as their participants.
- ❖ Studies that were published in a language other than English.
- ❖ Studies that did not measure stress or anxiety levels of pediatric oncology patients.

Search Process:

- ❖ Search engines: CINAHL Complete, PubMed, MEDLINE with Full Text, and Sage Journals Online.
- ❖ Keywords used: pediatric oncology, anxiety, stress, fear, distress
 - for creative therapy: art therapy, storytelling, music, guided imagination, drawing
 - for interactive therapy: dancing, pet therapy, movement, yoga, activity
- ❖ Multi-site randomized control trials, metasynthesis of multinational studies and a quasi-experimental study were used.
- ❖ Two authors reviewed 12 articles. Two articles were excluded for not being published in the needed time frame and 6 were excluded for not measuring stress.
- ❖ 4 articles met the criteria and were used for data collection.

Results



Analysis

Studies/Design	Sample	Assessment	Results
Hooke (2016) Quasi-experimental Level-III	13 cancer survivors (10-17 yrs. old), 6 adolescents and 7 children, who completed their cancer treatment 2-24 months before commencing the study.	The 13 participants were split in two groups, the first group received the 6-week yoga session first then the second group started their 6-week yoga session after them. Data collection tools used: The PedsQL Multidimensional Fatigue Scale was used to measure fatigue level of subjects. The Adolescent Sleep-Wake Scale (ASWS) was used to measure the subject's sleep quality. The Bruininks-Oseretsky Test of Motor Proficiency (BOT-2) Balance Subtest assess the subject's motor skills. Spielberger State Trait Anxiety Inventory (STAI) was used to measure the subject's psychological distress and well-being.	After the yoga session, Children had a significant decrease in anxiety score (P = .04). For adolescents, showed a decreasing trend on anxiety (P = .10). The rest of the variables (fatigue, sleep quality, and balance) did not significantly change with treatment.
McCullough, (2018) RCT Level-II	New diagnosis patients in the age group of 3-17 (n=106) were randomized to receive their standard care plus visits from a therapy dog or standard care only (the control group).	The study's data was collected over a span of 4 months. Data collections tools used: The State-Trait Inventory Child (or STAI-CH) was used to measure the stress and anxiety in the patients. The Pediatric Quality of Life Inventory (PedsQL) was used to look at the patient's quality of life, and blood pressure and heart rate was taken at the beginning and end to measure stress.	Children in both groups had a significant reduction in anxiety (P < .001). Overall, there were no significant differences in the other measures.
Piasai, (2018) RCT (Thailand) Level-II	40 hospitalized oncology pediatric patients, ranging from 6-12 years old. They 40 subjects were split into two groups (n=20) by randomization.	The 20 participants in the experimental group received guided imagination for 30 minutes (classical music with a woman's voice guiding their imagination) and then 30 minutes of storytelling. Data from both groups were collected before the procedures began, immediately after, and again 1 hour after. Data was collected using The Happiness Scale, the relaxation scale, vital signs, and salivary cortisol levels.	The mean scores in the experimental group were statistically higher (p < .001). At time 1 is the groups at baseline. At time 2 and time 3 (post-treatment), the experimental group demonstrated significantly more happiness and relaxation and lower heart rates and respiration rate.
Raybin, (2020) Metasynthesis Level-V	7 qualitative studies were used for a total of: 162 participants with various cancer types and medical treatment types. Types of qualitative studies: 1 Narrative, 1 Case Study, 2 Grounded Theory, 2 Phenomenological, and 1 other. Multinational (all high-income nations)	Two pediatric nurse practitioners reviewed 7 articles to determine how different creative arts therapy impacts the levels of distress in pediatric oncology patients	Creative arts therapy can be used to reduce the distress of children with cancer by using four different themes: Connection through creative expression. Subthemes: Good and Bad extremes, Enabling Research, Producing a Legacy, Reducing Stigma, Reducing Isolation, and Find Meaning. Coping is facilitated by creative arts Subthemes: Expression of feelings, Altruism, The Physical Tall, Having Fun, and Providing Support Communication enabled by creative arts interventions Subthemes: Gives a Voice, Facilitates Conversations, and Asserting Needs Continuance of time experienced through creative arts Subthemes: Passing Time and Live in the Present P-value is not applicable for this.

Discussion

- ❖ A limitation that should be noted is in one of the creative arts therapy articles. It used a heterogenous population and even though it was an international study, they were all from nations with high income (Raybin, 2019).
- ❖ One of the interactive therapy articles (yoga intervention) also had a large limitation as the sample size was very small, only 13 participants (Hooke, 2015).
- ❖ The level of evidence in the articles varied as two articles are level II, one is level III, and one is level V.
- ❖ A recommendation for the nursing field is to educate patients on the different types of interventions for their anxiety and give them options to be discussed with their health care provider.
- ❖ The nurse may face a barrier to the implementation as he or she may have trouble finding the time to do these interventions by his or herself or getting the hospital to budget for specific personnel and supplies needed for creative and interactive therapies.

Conclusions

- ❖ These studies did show that both interactive and creative therapy do decrease anxiety levels in pediatric oncology patients. However, there needs to be more research done to further prove which complementary therapy is more effective.

Nursing Implications:

- ❖ These studies can be used to further increase the awareness of the impact complementary therapies on pediatric oncology patients' anxiety. However, further research is need to be implemented as part of a patient's plan of care.

Recommendation for future studies:

- ❖ Future studies should focus on expanding their sample size to include patients with different types of cancer and researching into the lasting effect of these complementary therapies on pediatric patients' anxiety levels.

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