THE EFFECT OF INTEGRATIVE THERAPIES ON PEDIATRIC HEMATOLOGY/ONCOLOGY/HEMATOPOIETIC STEM CELL TRANSPLANT PATIENTS

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DISCLOSURES

➤ There is no commercial support associated with this activity

➤ The presenters have declared no conflict of interest
OBJECTIVES

➢ Discuss the principles of integrative nursing as they relate to supportive care of the pediatric hematology/oncology/hematopoietic stem cell transplant patient

➢ Identify three nonpharmacological interventions that help manage the side effects of disease and treatments in pediatric hematology/oncology/hematopoietic stem cell transplant patients

➢ Recall how nonpharmacological interventions can affect a pediatric patient's vital signs, pain, nausea, anxiety and fatigue
WHAT IS INTEGRATIVE NURSING?

➤ “A way of being-knowing-doing that advances the health and wellbeing of persons, families and communities through caring and healing relationships”

➤ A framework based on a set of principles that are consistent and aligned with major nursing theories

(Kreitzer & Koithan, 2019)
SIX PRINCIPLES OF INTEGRATIVE NURSING

➤ Human beings are inseparable from their environments

➤ Human beings have the innate capacity for health and well-being

➤ Nature has healing and restorative properties that contribute to health and well-being

➤ Integrative nursing is person-centered and relationship-based

➤ Integrative nursing practice is informed by evidence and uses the full range of therapeutic modalities to support/augment the healing process, moving from least intensive/invasive to more, depending on need and context

➤ Integrative nursing focuses on the health and well-being of caregivers as well as those they serve

(Kreitzer & Koithan, 2019)
WHAT ARE INTEGRATIVE THERAPIES (IT)?

➤ Not considered conventional medicine and used outside mainstream medicine

➤ Other names
   ➤ Complementary health approaches
   ➤ Complementary alternative medicine (CAM)

➤ Two groups
   ➤ Natural products
   ➤ Mind-body practices

(U.S. Department of Health and Human Services, National Institutes of Health, U.S. National Library of Medicine, 2018)
### CLINICAL INDICATIONS
- Anxiety
- Depressed mood
- Fatigue
- Gastrointestinal distress
- Headache
- Pain
- Insomnia

### PATIENT REPORTED
- Fear / Worry
- Pain
- Distraction
- Stress
- Sleeplessness
- Isolation / Loneliness
- Curiosity
- Boredom

Often patients and families need to experience Integrative Therapies to understand them!
Integrative therapies are considered safe and have low risk of interference with conventional therapies, but evidence is insufficient (Jacobs, 2014)

Between 31%-84% of pediatric oncology patients use CAM, most often as supportive care (Ladas, 2018)

Parents and patients report massage provides benefits during cancer treatment including symptom relief (Ladas, 2018)

Two small studies showed yoga is safe and feasible in pediatric oncology patients receiving chemotherapy, but further research is needed for efficacy of symptom management (Jacobs, 2014)

Reiki is well received by children and adults reporting no adverse effects (Jacobs, 2014)

Complementary therapies improve quality of life and reduced symptom distress in adult oncology patients (Stomski, et al., 2018)
2018 JOINT COMMISSION ADVISORY

➤ Advisory on evidence-based nonpharmacological solutions for pain management
  ➤ Organizations are required to provide non-pharmacological pain modalities relevant to its patient population
  ➤ These modalities serve as a complementary approach for pain management and may reduce the need for opioid medication in some circumstances

(The Joint Commission, Division of Healthcare Improvement, 2018)
BOSTON CHILDREN’S HOSPITAL
HEME / ONC / HSCT
INTEGRATIVE THERAPIES (IT) PROGRAM

➤ Nursing led
➤ Donor funded

➤ Standard of care
➤ Enhanced well-being
BOSTON CHILDREN’S HOSPITAL
IT PROGRAM OFFERINGS

➤ Patient Reiki
➤ Patient Massage
➤ Patient Yoga
➤ Caregiver Yoga
➤ Caregiver Massage
➤ Caregiver Reiki
➤ Sound Healing
➤ Headspace© App
DATA COLLECTION METHODS

Pre Integrative Therapies

Circle the face that best matches your current level of:

<table>
<thead>
<tr>
<th>Pain</th>
<th>0</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Hurt</td>
<td>Hurts Little Bit</td>
<td>Hurts Little More</td>
<td>Hurts Even More</td>
<td>Hurts Whole Lot</td>
<td>Hurts Worst</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nausea</th>
<th>0</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Anxiety</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Fatigue</th>
<th>No Fatigue</th>
<th>Mild</th>
<th>Moderate</th>
<th>Extreme</th>
<th>The Worst Fatigue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Age  | Gender | Race | DX | LOS | Treatment
---|-------|-----|----|-----|---------

Pain: Wong-Baker FACES® scale
Anxiety: Children’s Fear Scale
Nausea: Baxter Animated Retching Faces (BARF) scale
Fatigue: Oncology Nursing Society® Fatigue Scale
PATIENT INTEGRATIVE THERAPY SESSIONS

<table>
<thead>
<tr>
<th>Year</th>
<th>Yoga</th>
<th>Massage</th>
<th>Reiki</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>18</td>
<td>126</td>
<td>191</td>
</tr>
<tr>
<td>2019</td>
<td>34</td>
<td>217</td>
<td>341</td>
</tr>
<tr>
<td>2020</td>
<td>36</td>
<td>80</td>
<td>195</td>
</tr>
</tbody>
</table>
DEMOGRAPHICS

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant</td>
<td>One year old or younger</td>
</tr>
<tr>
<td>Toddler</td>
<td>&gt;1 to 3 years of age</td>
</tr>
<tr>
<td>Preschool</td>
<td>&gt;3 to &lt;5 years of age</td>
</tr>
<tr>
<td>School Age</td>
<td>5 to &lt;13 years of age</td>
</tr>
<tr>
<td>Teenager</td>
<td>13 to &lt;18 years of age</td>
</tr>
<tr>
<td>Adult</td>
<td>18 and older</td>
</tr>
</tbody>
</table>

IT Sessions by Age

IT Sessions by Gender
SURVEY STATISTICS

381 Surveys

➤ 72% of pre-surveys completed (n=275)

➤ 39% of post surveys completed (n=149)

➤ 60% of post surveys were not completed (n=227)
  ➤ 77% of patients were asleep (n=175)
  ➤ 22% of patients were too young/developmentally unable (n=50)
EFFECT OF IT ON PAIN

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Pre-Pain</td>
<td>4.8</td>
<td>4.5</td>
</tr>
<tr>
<td>Avg. Post-Pain</td>
<td>3.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Count (N)</td>
<td>41</td>
<td>28</td>
</tr>
</tbody>
</table>
### EFFECT OF IT ON NAUSEA

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Pre-Nausea</td>
<td>4.0</td>
<td>3.8</td>
</tr>
<tr>
<td>Avg. Post-Nausea</td>
<td>1.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Count (N)</td>
<td>18</td>
<td>11</td>
</tr>
</tbody>
</table>

![Graph](image)
## EFFECT OF IT ON ANXIETY

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Pre-Anxiety</td>
<td>1.9</td>
<td>2.6</td>
</tr>
<tr>
<td>Avg. Post-Anxiety</td>
<td>0.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Count (N)</td>
<td>31</td>
<td>23</td>
</tr>
</tbody>
</table>

![Bar chart showing the comparison of average anxiety levels for female and male participants before and after intervention.](chart.png)
EFFECT OF IT ON FATIGUE

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Pre-Fatigue</td>
<td>4.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Avg. Post-Fatigue</td>
<td>3.4</td>
<td>2.8</td>
</tr>
<tr>
<td>Count (N)</td>
<td>50</td>
<td>42</td>
</tr>
</tbody>
</table>
## SUMMARY OF QUANTITATIVE DATA

<table>
<thead>
<tr>
<th>Variable</th>
<th>Completed surveys reporting &gt; 0 on the pre-variable</th>
<th># of patient reported decreases</th>
<th>% of change from original value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>n=69</td>
<td>37 (54%)</td>
<td>69%</td>
</tr>
<tr>
<td>Nausea</td>
<td>n=29</td>
<td>24 (83%)</td>
<td>47%</td>
</tr>
<tr>
<td>Anxiety</td>
<td>n=54</td>
<td>43 (80%)</td>
<td>36%</td>
</tr>
<tr>
<td>Fatigue</td>
<td>n=94</td>
<td>55 (59%)</td>
<td>71%</td>
</tr>
</tbody>
</table>
NURSING OBSERVATIONS

- Asleep: 47.51%
- Relaxed: 45.93%
- Restless: 3.67%
- Other: 2.89%
WHAT PATIENTS ARE SAYING

➤ “That was delicious, thank you”
➤ “I feel less anxious”
➤ “I feel so relaxed and ready to nap”
➤ “You should offer this more often. It really helps with my anxiety”
➤ “I like reiki.”
➤ “I feel way better!”
➤ “It helped calm me.”
WHAT CAREGIVERS ARE SAYING

➤ “There’s calm and relaxed energy. She’s relaxed and peaceful after”

➤ “Integrative therapies have been very healing. She’s always calmer, less pain, less stress 😊”

➤ “Thank you for making this service available to your patients.”

➤ “Reiki helped him a lot. I noticed my son was more relaxed. Less pain, discomfort, vital signs improved.”

➤ “My daughter loves getting massage to relieve herself from back pain. She feels content after massage.”

➤ “She receives reiki very well and feels the relaxing and calming effect. It’s her means to relax and be more herself.”

➤ “My daughter needs the therapies. She always looks forward to the next session.”

➤ “He is playing, he is happy, thank you.”

➤ “She asks for reiki every morning. It helps her relax and be comfortable. She always takes a restful nap during and after.”
IMPLICATIONS/NEXT STEPS

➤ Value to patient care
  ➤ Statistical significance

➤ Standard error with incomplete data sets
  ➤ Improvements with data collection
REFERENCES


ACKNOWLEDGEMENTS

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THANK YOU!