

Spirituality as a Predictor of Distress, Symptoms and Sleep in a Sample of Adult Inpatients Undergoing Treatment for Acute Leukemia

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- Following diagnosis, patients are immediately hospitalized for 4-6 weeks (and sometimes longer for complications)
 - No time is left to reflect on the diagnosis or its implications
 - Most common treatment-related symptoms include:
 - Fatigue
 - Sleep disturbance
 - Nausea/vomiting
 - Mouth sores
 - Increased vulnerability to illness/infection
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- Subtypes of acute leukemia:
 - Acute myeloid/ myelogenous leukemia (AML)
 - Acute lymphoblastic leukemia (ALL)
 - Overall 5-year survival rate:
 - 21.3% for AML
 - 66.1% for ALL
 - Treatment:
 - Induction chemotherapy
 - Consolidation chemotherapy
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- Increasing research on possible health benefits of religion and spirituality

 - Spirituality associated with:
 - Better quality of life
 - Better health-related quality of life
 - Less distress
 - Better immune status

 - Few longitudinal studies
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- To examine spirituality and its relationship to psychological and physical health measures in a sample of adult patients undergoing treatment for acute leukemia
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- Patients recently diagnosed with acute leukemia completed up to 3 packets of questionnaires:
 - Week 0 (within 7 days of diagnosis/admission)
 - Weeks 5-6 (prior to hospital discharge)
 - Weeks 9-13 (upon readmission for consolidation chemotherapy)
 - All patients were recruited from Wake Forest University Baptist Medical Center.
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- Spirituality (FACIT-Sp)
 - Faith
 - Meaning/Peace
 - Symptom severity (MDASI)
 - Life interference (MDASI)
 - Perceived threat
 - Distress (POMS-SF Total Mood Disturbance)
 - Sleep difficulty (WHIIRS)
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- Mean age = 48.6 years (SD = 15.2; range: 19-81)
 - Race: 91% White
 - Marital Status: 73% married/partnered
 - Sex: 55% female
 - Diagnosis:
 - Acute myelogenous leukemia: 79%
 - Acute lymphocytic leukemia: 21%
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- Education:
 - ≤H.S. diploma: 42%
 - Some college/vocational training: 31%
 - College degree or higher: 27%

 - Religious Attendance:
 - Frequent: 46%
 - Moderate/Occasional: 31%
 - Rare/Never: 22%
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Time 1 (Baseline)

N = 67



Time 2 (Weeks 5-6)

N = 41



Time 3 (Weeks 9 - 13)

N = 38

- Refusal/ not feeling well (n=12)
 - Died (n=7)
 - Major complications (n=6)
 - Other (n=1)
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- Refusal/ not feeling well (n=15)
 - Died (n=9)
 - Major complications (n=5)

- Linear repeated measures mixed effects models
 - Assessed whether spirituality at baseline was related to:
 - Symptom severity
 - Life interference
 - Perceived threat
 - Psychological distress
 - Sleep difficulty
 - Separate analyses for each factor of the FACIT- sp (Faith and Meaning/Peace)
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Faith Score as Predictor of Psychological and Physical Health

| <u>Outcome Variable*</u> | <u>Estimate (SE)</u> | <u>p-value</u> |
|---------------------------------|-----------------------------|-----------------------|
| Symptom Severity | -0.28 (0.78) | <i>p=0.72</i> |
| Symptom Interference | -0.22 (0.54) | <i>p=0.69</i> |
| Perceived Cancer Threat | -0.08 (0.02) | <i>p</i>≤0.001 |
| Psychological Distress | -2.23 (1.03) | <i>p=0.04</i> |
| Sleep Difficulty | -0.25 (0.19) | <i>p=0.19</i> |

*Demographic variables included in model: age, race, marital status, education, days since diagnosis, religious attendance and type of leukemia

Meaning/ Peace Score as Predictor of Psychological and Physical Health

| <u>Outcome Variable*</u> | <u>Estimate (SE)</u> | <u>p-value</u> |
|--------------------------|----------------------|-----------------------|
| Symptom Severity | -1.19 (0.44) | <i>p</i>=0.01 |
| Symptom Interference | -0.93 (0.29) | <i>p</i>=0.002 |
| Perceived Cancer Threat | -0.05 (0.01) | <i>p</i>≤0.001 |
| Psychological Distress | -3.19 (0.50) | <i>p</i>≤0.001 |
| Sleep Difficulty | -0.40 (0.10) | <i>p</i>≤0.001 |

***Demographic variables included in model: age, race, marital status, education, days since diagnosis, religious attendance and type of leukemia**

- The two factors of the FACIT-sp have different relationships to psychological and physical well-being in acute leukemia patients
 - Spirituality as a predictor of patient's physical and psychological well-being
 - Role of spirituality in helping cancer patients cope with an intense treatment regimen
 - Additional longitudinal research is needed
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- Limitations
 - Self-report
 - Attrition
 - Limited sample size

 - Clinical implications
 - Meaning/Peace as baseline assessment of risk factors
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