Expressive Arts Interventions to Address Psychosocial Stress Among Healthcare Professionals: A Systematic Review

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RWJF Future of Nursing Scholar
SIGNIFICANCE

- Increasing rates of burnout and compassion fatigue\textsuperscript{1-3}
- Higher levels of depression and suicide\textsuperscript{4}
- Direct impact on patient care outcomes\textsuperscript{5-7}
- Policy recommendations\textsuperscript{8,9}

“Clinician Well-Being to be a National Priority”
Causes of Workplace Stress

- Work load
- Staffing
- Paperwork/computer work vs human connections
- Patient suffering
- Patient death (cumulative)
- Trauma
- Moral distress

Adverse Outcomes of Workplace Stress

- Physical exhaustion
- Emotional exhaustion
- Depression, anxiety, sleep disturbances
- Spiritual exhaustion
- Compassion Fatigue/Secondary Traumatic Stress
- Burnout
BACKGROUND

- 2016-2017: 5 Systematic Reviews looking at interventions addressing various aspects of stress and wellbeing in nurses and physicians.

  - Interventions: Education programs, retreats, MBSR, relaxation skills, cognitive training, organizational changes to workload, teamwork and communication.

  - Findings: Relatively few methodologically robust intervention studies (most weak); large variation in conceptual bases and outcome measures; and a only a moderate improvement in the majority of outcomes evaluated. MBSR interventions appeared to have the greatest benefit on perceived stress.

Expressive Arts Interventions
CREATIVITY AND STRESS

- Art-making decreases cortisol levels.\textsuperscript{10}

- Potential to address psychosocial functioning, spirituality, and meaning-making.\textsuperscript{11-13}

- Storytelling helps connect us to our own and others' humanity.\textsuperscript{14}

- Expressive writing improves emotional outcome.\textsuperscript{15}

- Music can evoke emotion that words and writing alone cannot access.\textsuperscript{16}
RESEARCH QUESTIONS

- What are the sample and study characteristics?
- What are the characteristics of the expressive arts interventions used to address psychosocial stress in healthcare professionals?
- What are the outcome measures used the impact of interventions on these outcomes?
Inclusion Criteria

1) Intervention studies conducted between 1997-2017 that address workplace stress, professional grief, compassion fatigue, secondary traumatic stress, or burnout;

2) Interventions must utilize the expressive arts (music, poetry, narrative, storytelling, writing, singing, dancing);

3) Quantitative and mixed methods studies that evaluate the effectiveness or acceptability of the intervention;

4) Any healthcare professional;

5) Any healthcare specialty; and,

6) Articles written in English.

Search Strategies

- Search Engines: SocINDEX, PsycINFO, Pubmed, and CINAHL, and ancestry literature.

- Keywords: compassion fatigue, burnout, workplace stress, professional grief, interventions, effectiveness research, creativity, expressive arts, music, expressive writing, narrative, storytelling, resilience, nurses, doctors, social workers, healthcare professionals, self-care.
SocINDEX 1997-2017
288 Citation(s)

PsychINFO 1997-2017
970 Citation(s)

Pubmed 1997-2017
893 Citation(s)

CINAHL 1997-2017
1169 Citation(s)

Ancestors Search 1997-2017
13 Citation(s)

249 Non-Duplicate Citations Screened

Inclusion/Exclusion Criteria Applied

222 Articles Excluded After Title/Abstract Screen

27 Articles Retrieved

Inclusion/Exclusion Criteria Applied

10 Articles Excluded After Full Text Screen

2 Articles Excluded During Data Extraction

15 Articles Included
<table>
<thead>
<tr>
<th>Categories</th>
<th>High (1)</th>
<th>Medium (2)</th>
<th>Low (3)</th>
<th>Reference for Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection</td>
<td>- Outcomes compared between treatment and control group.</td>
<td>- Outcomes compared between treatment and control groups.</td>
<td>- Uncontrolled before and after studies.</td>
<td>Criteria defined by Blomberg, Griffiths, Wengstrom, May, and Bridges, 2016.</td>
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<tr>
<td></td>
<td>- Allocation was random.</td>
<td>- Non-random allocation.</td>
<td>- Controlled before and after where equivalence between groups was not demonstrated.</td>
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<tr>
<td></td>
<td>- Equivalence between groups demonstrated.</td>
<td>- Equivalence between groups demonstrated.</td>
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<tr>
<td></td>
<td>Designs: RCT, cluster RCT</td>
<td>Small N Designs: cluster RCT with small N, controlled before and after with non-randomized groups</td>
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<tr>
<td>Outcome Measure</td>
<td>- Reliable and Valid tools used and described.</td>
<td>- Reliability and validity of tools not described.</td>
<td>Researcher generated tools used to measure outcomes.</td>
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<tr>
<td>Intervention Fidelity</td>
<td>- Intervention fidelity described.</td>
<td>- Intervention fidelity described.</td>
<td>- Intervention fidelity not described.</td>
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<td></td>
<td>- Consistently applied</td>
<td>- Consistently applied</td>
<td>- Adherence reported between 60-85%.</td>
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<td>- Adherence reported and greater than &gt;85%</td>
<td>- Adherence reported</td>
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**Total Score** | **Quality Rating**
1.0 - 1.69 | High Quality
1.7 – 2.39 | Medium Quality
2.4 – 3.0 | Low Quality
## Criteria for Quality Evaluation

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<tr>
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<td>was not demonstrated.</td>
<td>Wengstrom, May,</td>
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<td>with non-randomized groups.</td>
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<td>- Adherence not reported.</td>
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<td></td>
<td>- Adherence reported and greater than &gt;85%</td>
<td>- Adherence reported between 60-85%.</td>
<td>- Or adherence not reported.</td>
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### Studies (N=15) Quality Rating

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<table>
<thead>
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<tbody>
<tr>
<td>2</td>
<td>High Quality</td>
</tr>
<tr>
<td>7</td>
<td>Medium Quality</td>
</tr>
<tr>
<td>6</td>
<td>Low Quality</td>
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</table>
**RESEARCH QUESTION 1: STUDY CHARACTERISTICS**

## Summary of Study Characteristics (Studies=15)

<table>
<thead>
<tr>
<th>Study Characteristics</th>
<th>N</th>
<th>%/X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample Size</td>
<td>917</td>
<td></td>
</tr>
<tr>
<td>Median Sample Size (range)</td>
<td>30 (6-248)</td>
<td></td>
</tr>
<tr>
<td>Study Year (range)</td>
<td>2003-2016</td>
<td></td>
</tr>
<tr>
<td>Median Year</td>
<td>2013</td>
<td></td>
</tr>
<tr>
<td>Studies within last 5 years</td>
<td>8</td>
<td>53%</td>
</tr>
<tr>
<td>Studies within last 10 years</td>
<td>12</td>
<td>80%</td>
</tr>
<tr>
<td>Country of study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>11</td>
<td>73%</td>
</tr>
<tr>
<td>Other (United Kingdom, Lithuania, Hong Kong, Italy)</td>
<td>4</td>
<td>27%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>606</td>
<td>66.1%</td>
</tr>
<tr>
<td>Mean Age (SD) (range)</td>
<td>313</td>
<td>39.19 (19-78)</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse</td>
<td>536</td>
<td>58.5%</td>
</tr>
<tr>
<td>Social Worker</td>
<td>98</td>
<td>10.7%</td>
</tr>
<tr>
<td>Physician</td>
<td>23</td>
<td>2.5%</td>
</tr>
<tr>
<td>Other</td>
<td>233</td>
<td>25.4%</td>
</tr>
</tbody>
</table>

**Research Design**

- 2 - Randomized Controlled Trial
- 8 - Quasi-Experimental
  - 1 Group Pre and Post Test
  - 2 Group Pre and Post Test
    - (Control and Comparison Groups)
- 5 - Mixed/Multiple Methods
  - 1 Group Pre and Post Test
RESEARCH QUESTION 2: INTERVENTION CHARACTERISTICS

- Needs Assessment/Pilot Testing
- Location
- Intervention Facilitator
- Timing/Intensity
- Data Points
- Expressive Arts + Education

Expressive Arts Interventions

- 53% Storytelling/Narrative
- 27% Art-Based
- 20% Music-Based

Art-Based  Music-Based  Storytelling/Narrative
## Research Question 3: Outcome Measures

<table>
<thead>
<tr>
<th>Study</th>
<th>Art-based Intervention Characteristics</th>
<th>Art-based Study Quality</th>
<th>Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anderson, 2016</strong></td>
<td>Knitting</td>
<td>Low</td>
<td>△</td>
</tr>
<tr>
<td><strong>Huet, 2016</strong></td>
<td>Art-viewing, art-making, debriefing</td>
<td>Medium</td>
<td>--</td>
</tr>
<tr>
<td><strong>Ifrach, 2016</strong></td>
<td>Art-making to add to a group peace pole</td>
<td>Low</td>
<td>NR ▲</td>
</tr>
<tr>
<td><strong>Italia, 2008</strong></td>
<td>Psycho-education with Art activities</td>
<td>Low</td>
<td>▲</td>
</tr>
<tr>
<td><strong>Karpaviciute, 2016</strong></td>
<td>Silk painting</td>
<td>Medium</td>
<td>△** △</td>
</tr>
<tr>
<td><strong>Kravits, 2010</strong></td>
<td>Self-care education through poetry and art (oil pastels)</td>
<td>Medium</td>
<td>△</td>
</tr>
<tr>
<td><strong>Potash, 2014</strong></td>
<td>Art-based vs Skills-based</td>
<td>Medium</td>
<td>▲ ▲**</td>
</tr>
<tr>
<td><strong>Salzano, 2013</strong></td>
<td>Decorating quilt panels for a group quilt</td>
<td>Medium</td>
<td>▲</td>
</tr>
<tr>
<td><strong>Music-based</strong></td>
<td>Drumming with keyboard accompaniment.</td>
<td>High</td>
<td>▲**</td>
</tr>
<tr>
<td><strong>Bormann, 2006</strong></td>
<td>Mantram creation and repetition</td>
<td>Medium</td>
<td>▲ ▲</td>
</tr>
<tr>
<td><strong>Hilliard, 2006</strong></td>
<td>Unstructured music making vs structured music making</td>
<td>Medium</td>
<td>--1 △2 ▲1 ▲2</td>
</tr>
<tr>
<td><strong>Wlodarczyk, 2013</strong></td>
<td>Songwriting</td>
<td>High</td>
<td>-- -- -- +</td>
</tr>
<tr>
<td><strong>Storytelling/Narrative</strong></td>
<td>Peer-Storytelling</td>
<td>Low</td>
<td>△ --</td>
</tr>
<tr>
<td><strong>MacPherson, 2008</strong></td>
<td>Virtual Peer-Storytelling</td>
<td>Low</td>
<td>△</td>
</tr>
<tr>
<td><strong>Rice, 2014</strong></td>
<td>Narrative Training</td>
<td>Low</td>
<td>▼</td>
</tr>
<tr>
<td><strong>Sands, 2008</strong></td>
<td></td>
<td>Low</td>
<td>▲</td>
</tr>
</tbody>
</table>

▲ Significant Improvement  △ Non-significant Improvement  -- No change  ▼ Significant deterioration  ▽ Non-significant deterioration

NR=Not reported  + Personal sacrifice burden subscale  * Emotional Exhaustion Subscale  ▲ Personal accomplishment subscale  ** p=0.06
RESEARCH QUESTION 3: INTERVENTION IMPACT ON OUTCOMES

Effect Size

- Burnout
- Emotional Exhaustion
- Depersonalization
- Personal Accomplishment
- Stress
- Anger (Bittman)
- Anger (Bormann)
- Anxiety (Bittman)
- Anxiety (Bormann)
- Grief

Cohen’s D (1988)
Small = 0.2
Medium=0.5
Large=0.8

- Storytelling/Narrative
- Music-Based (Bormann)
- Art-Based
DISCUSSION

- Outcomes – large variety of outcome measures
- Storytelling and Narrative Interventions
- Psycho-education + Expressive Arts Intervention
CONCLUSIONS

- Creative expression and art can enhance psychosocial wellbeing and decrease stress.
- Evidence to support the use of expressive arts interventions.
- More high-quality intervention research is required to improve the work lives and wellbeing of HCPs.
REFERENCES


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