Effects of Music and Movement on Mood in Patients with Major Depressive Disorder
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INTRODUCTION
• Reducing psychological distress in patients diagnosed with Major Depressive Disorder (MDD) may:  
  - Reduce depression-related aggressive acts towards self including suicidal attempts  
  - Increase self-efficacy of patients’ exercise ability  
  - Reduce cost of mental health care  
• More than 350 million people suffer from depression-related disorders worldwide, which negatively impacts their quality of life and increases their potential for risk of suicide.  
• Depression is determined by having extended, negative, persistent mood or psychological distress. All of life’s events, whether physiological or psychological, have an effect on psychological distress.  
• Therapeutic interventions of aerobic dance therapy may help to improve mood in patients with mild to moderate depression.  
• Problem: Major depression is among the top diseases affecting quality of life in the world, and as a result, mental healthcare costs are overwhelming.  
• The purpose of this project was to examine the current state of the literature regarding the effect of music plus movement on MDD to improve mood and determine an effective dose response.

METHODS
• Databases searched: CINAHL, Medline, PsycINFO, Cochrane, Galileo  
• Keywords: major depressive disorder, movement, music, exercise, depression  
• Inclusion criteria:  
  - English language articles from 2006 – 2015  
  - All theoretical frameworks concerning depression  
  - Inclusion criteria expanded to include depression, exercise, and stress as measured by cortisol  
• Exclusion criteria:  
  - Non-related mood disorders such as bipolar disorder, borderline personality disorders and schizophrenia  
  - Assessed publication quality level via this tool: Stetler Level of Quality scale – Level III = quasi experimental studies  
• 31 studies found and reviewed that met eligibility criteria

RESULTS
Table 2: Literature Review Evidence Table
<table>
<thead>
<tr>
<th>Study</th>
<th>Quality Level</th>
<th>Design; Sample Size</th>
<th>Study Aims</th>
<th>Major Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annesi et al. (2012)</td>
<td>III B</td>
<td>RCT; 322</td>
<td>Evaluate predictors of exercise related mood improvement</td>
<td>Change in exercise-related self-efficacy was stronger independent predictor of mood than volume of exercise.</td>
</tr>
<tr>
<td>Eisendrath et al. (2014)</td>
<td>III B</td>
<td>RCT; 124</td>
<td>Evaluate mindfulness-based cognitive therapy (MBCT) versus health-enhancement program (HEP) of music and exercise</td>
<td>HEP and MBCT are effective complementary therapies for treatment resistant depression; relapse with similar outcomes expected.</td>
</tr>
<tr>
<td>Knubben et al. (2007)</td>
<td>III B</td>
<td>Prospective RCT; 38</td>
<td>Evaluate short-term effects of exercise</td>
<td>Endurance exercise improves mood in a short amount of time, helping to determine dose.</td>
</tr>
<tr>
<td>Legrand et al. (2014)</td>
<td>III B</td>
<td>RCT; 44</td>
<td>Examine effects of exercise in physical and global self esteem and self-perception</td>
<td>Exercise effective as prevention of depression and improved physical self-perception.</td>
</tr>
<tr>
<td>Murrock et al. (2014)</td>
<td>III B</td>
<td>Feasibility Study; 40</td>
<td>Evaluate effects of dance intervention on depression, physical function and disability</td>
<td>Dance intervention effective adjunct therapy to improve symptoms of depression, disability and physical function.</td>
</tr>
<tr>
<td>Schuch et al. (2011)</td>
<td>III B</td>
<td>RCT; 26</td>
<td>Determine effectiveness of exercise dose</td>
<td>Different dose = Lower Hamilton scores for both; no significant difference after week two; some fatigue occurred with higher dose.</td>
</tr>
</tbody>
</table>

CONCLUSIONS
• Reducing psychological distress and improving mood regularly over time reduces MDD symptoms.  
• Significant movement reduces the risk of depression.  
• Music incites movement in most people. This literature review found that music plus movement was more effective in reducing psychological distress in patients with MDD than music or movement alone.  
• Higher intensity, extended duration movement such as aerobics results in positive initial mood, but after fatigue began, negative effect on mood was noted.  
• Lack of adequate and consistent measurement tools resulted in inconsistent and inconclusive results in change of depressive symptoms for patients with MDD.

CLINICAL IMPLICATIONS
• More high quality research needed to determine effective quantity and intensity dose of music plus movement in patients with MDD to relieve symptoms and improve quality of life.  
• Quality of the effects of music plus movement on MDD in reducing risk of suicide needs to be determined as a low cost adjunct to usual treatment.  
• The effectiveness of music plus movement as an adjunct intervention to reduce psychological distress and MDD symptoms needs to be explored, particularly as compared to treatment as usual in this population, to reduce overall healthcare cost.

REFERENCES

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