Music has been used to decrease anxiety and stress in adults (Smith, 2008). Music has been found to have a physiologic effect on patients by decreasing blood pressure, and by helping to regulate breathing and improve muscle tone (Lee, Lieu, & Chen, 1999).

Music therapy has been found to be an effective treatment for patients diagnosed with chronic mental illnesses including major depression, Alzheimer’s disease and bipolar disorder (Silverman, 2011). Although many studies demonstrate the benefits of music therapy on physical and emotional states, there is little research that examines the use of karaoke among persons with psychiatric illnesses, and none that examined its use and effect among psychiatric patients in an acute inpatient setting.

### Purpose and Questions

The purpose of this study was to evaluate the effects of karaoke on pain, anxiety, and sleep for patients in an acute care inpatient psychiatric unit.

RQ1. Does participation in karaoke have any immediate effects on sleep quality?

RQ2. Does participation in karaoke decrease anxiety levels?

RQ3. Does participation in karaoke decrease patient’s reported pain levels?

RQ4. Do patients have improved self-disclosure in group therapy after attending karaoke group?

### Background

Music therapy has been found to be an effective approach for psychiatric patients (Silverman, 2011). Although many studies demonstrate the benefits of music therapy, there is little research that examines the use and effect of karaoke among patients with psychiatric illnesses.

### Method

Study participants completed a survey on sleep and the STAI – state anxiety instrument pre and post karaoke group attendance.

Review of the participant’s medication administration record 24 hours pre and post karaoke group was completed.

Medical record review of the counselor’s group therapy notes pre and post karaoke group were conducted.

Participants completed post karaoke survey of relaxation, mood and stress using a 5-point scale.

Statistical methods included McNemar’s, KR-20, Wilcoxon signed-rank, and one-sample z-tests.

### Results

#### Demographics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N (%) or Mean ± SD (Min, Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female 37 (60.7) Male 24 (39.3)</td>
</tr>
<tr>
<td>Race</td>
<td>African-American 11 (18.0) American Indian 1 (1.6) Hispanic or Latino 1 (1.6) Caucasian 45 (73.8)</td>
</tr>
<tr>
<td>Diagnosis*</td>
<td>Affective Disorder 1 (1.6) Alcohol Abuse 13 (21.3) Bipolar 17 (27.9) Addiction 1 (1.6) Borderline 3 (4.9) Tourette’s 1 (1.6) PTSD 5 (8.2) Depression 31 (50.8) Anxiety 3 (4.9) Substance Abuse 9 (14.8)</td>
</tr>
<tr>
<td>Days on Unit</td>
<td>3.8 ± 3 (1.15)</td>
</tr>
</tbody>
</table>

#### Measures

- Relaxation (1/MMT): A state of relaxation
- Stress (1/MMT): A state of stress
- STAI (1/50): A state of anxiety
- PRO (1/100): A state of pain

#### STAI Pre and Post Karaoke

<table>
<thead>
<tr>
<th>Measure</th>
<th>Before Karaoke (n = 52)</th>
<th>After Karaoke (n = 41)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAI-State</td>
<td>48.9 ± 11.08</td>
<td>43.59 ± 12.88</td>
<td>0.031</td>
</tr>
</tbody>
</table>

#### Table 1: Demographics of the study sample (n = 61)

#### Table 2: Post-karaoke ratings of measures

#### Table 3: Results for RQ2 analysis:

RQ2: A paired sample t-test was conducted to determine if a statistically significant change in participants’ state anxiety levels occurred after karaoke participation.

#### Table 4: Results for RQ1 analysis:

RQ1: A McNemar test was conducted to determine if a statistically significant change in participants’ self-disclosure levels occurred after karaoke participation.

#### Summary

- Participation in karaoke was associated with a statistically significant decrease in state-anxiety levels.
- Almost one-third (30.4%) of patients with known PRN medications status had a decrease in usage of their PRN medications.
- Almost one-fourth (24.2%) increased their levels of group participation after karaoke.
- Average post-karaoke ratings for relaxation, stress, mood, and talking in group were very positive.
- Participation in karaoke did not have any statistically significant immediate effects on sleep quality in the measures above.

### Conclusions

- Based on the findings from this study, the impact on the unit and on patients who participate in karaoke has the potential to be a positive one.
- We found statistically significant improvements in participants’ state anxiety levels, their ‘as needed’ medication use and in their group therapy participation. Thus, patients may feel less anxious after attending karaoke and therefore may be better able to participate in treatment after attending.
- Because patients in this study improved in their group participation after karaoke, they may benefit more from their therapies with karaoke participation.
- Since ‘as needed’ medication use significantly decreased after karaoke participation, this may further reflect that patients are less anxious and perhaps, therefore, more amenable to treatments.
- The unit milieu may be positively affected by patients’ participation in karaoke group. If patients are less anxious and more involved in their treatment, this could contribute to milieu stability.
- Since patients respond positively to karaoke on some important measures (anxiety, as needed medication use, and group therapy participation level), all of which may positively impact their treatment, karaoke might contribute to shorter length of inpatient stays. Further research is needed in order to test this hypothesis.

### References

