The Effects of Live Music on University Students’ Stress Levels

Carly Ek, Meg Stofer, Maddie Pantoni, Johnna Medina, Robert Josephs
The University of Texas at Austin

BACKGROUND

• Stress has detrimental effects on physical and mental health, and is especially prevalent among young adults in college.
• Rates of perceived stress (PS), or the subjective appraisal of one’s environment as overwhelming or “out of one’s control”, are rising in the US.
• Identifying psychosocial factors that reciprocally relate to stress in adults may help (1) uncover protective and antagonistic factors, and (2) guide the development of behavioral stress-management interventions for high-stress populations.
• There is growing empirical support of music for improving emotional well-being.
• Listening to recorded music can target both physiologic and psychological components of the human stress response.
• Attendance of LMEs has been found to acutely invoke states of happiness.
• The unique and lasting effects of LME on well-being are unclear.

**Hypothesis:**
• Our survey-based cross-sectional study predicts that among college students (i.e., a stress-elevated group) participants who regularly attend live music events (i.e., ≥4 within the past year) would have lower mean PS levels compared to their lower-attending counterparts.

AIM

In order to indirectly examine the lasting effects of live music, we aim to examine the relation between frequency of live music event attendance and past month’s perceived stress.

METHOD

**Participants**
136 undergraduate students attending the University of Texas at Austin.
• 38 males and 98 females.

**Online Survey Assessment**
- Generated through zoho.com
- Distributed through UT Facebook group pages
- Self-reported
- Frequency of live music attendance in the past year
- Demographics
- Perceived stress

**Measures**
- **Perceived Stress**
- **Perceived Stress Scale (PSS-10; Cohen et al., 1983)** assesses the degree to which situations in one’s life are appraised as stressful. (Over past 30 days)

**Statistical Analysis**
One-way Analysis of Variance (ANOVA)
- Mean PSS score compared between (4) groups based on yearly LME attendance.

<table>
<thead>
<tr>
<th>Group</th>
<th>Attendance/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-1</td>
</tr>
<tr>
<td>2</td>
<td>2-3</td>
</tr>
<tr>
<td>3</td>
<td>4-5</td>
</tr>
<tr>
<td>4</td>
<td>&gt;6</td>
</tr>
</tbody>
</table>

**Post-Hoc**
- Analysis of gender and attendance revealed no significant differences. However, females had significantly higher PSS scores than males in each of the groups.

**RESULTS**

**The Effect of Live Music Event attendance on Perceived Stress:**
- The main effect of live music attendance revealed that students who attended live music events more often tended to have significantly lower mean perceived stress levels (F(3, 132) = 4.374, p = .004).
- Furthermore, significantly lower mean PSS among between regular attendees (Groups 3 or 4), than lower attendance groups (Groups 1 and 2).
- Additionally, those who attended six or more LME per year (Group 4), had significantly lower mean PSS (M = 1.47) than those who attended 1-3 (M = 1.82, SD = .46; group 1, M = 1.87, SD = .59; group 2).

**Mean PSS demonstrates the average mean rating of response choices between groups. Thus, it compares the mean total score between the groups. Response choices range from 1-5.**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean PSS</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>1.62</td>
</tr>
<tr>
<td>2</td>
<td>1.73</td>
</tr>
<tr>
<td>3</td>
<td>1.22</td>
</tr>
<tr>
<td>4</td>
<td>1.23</td>
</tr>
<tr>
<td>Average</td>
<td>1.51</td>
</tr>
</tbody>
</table>

**Post-Hoc:**
- Analysis of gender and attendance revealed no significant differences. However, females had significantly higher PSS scores than males in each of the groups.

**CONCLUSIONS**

- In line with the findings of the beneficial effects of live music on well-being, and consistent with our hypothesis, we found that those who attend LME more often (i.e., regularly) had lower average stress levels than those who did not attend such events as often.
- Indeed, those who attended LME in our sample to the greatest degree had the lowest mean PSS of all groups.
- Though we did not find that the effects of LME on lower stress varied as a function of gender, we did find significantly higher reported stress in women (compared to men) for all levels of LME attendance.
- Results from our study support live music as a potentially useful tool for self-guided stress-management in adult students who are exposed to academic, adjustment, and other college-related forms of stress.
- These results may be especially applicable to UT students who live in the “Live Music Capital of the World.”
- LMEs may be an especially feasible, accessible, and attractive activity to implement for stress reduction.

**Limitations & Future Directions**
- Though our ultimate aim is to examine the effects of live music on stress, our design is limited in that we are unable to test this aim directly in a correlational, cross-sectional study that failed to test directionality or control for third variables that could influence our results [e.g., varied classwork load; free time available to participants in various conditions; pre-existing demographic and personality characteristics [esp. of those attending greater LMEs]].
- Future studies should experimentally examine the effects of LME attendance on stress longitudinally, as well as:
  - Extend effects to clinical high-stress samples
  - Test various moderators (e.g., gender) and mechanisms (e.g., social, cognitive, neural) responsible for live music’s effects
  - Finding additional ways to help people cope with stress is meaningful work deserving further attention, which includes studying the positive effects of the live music experience.

**REFERENCES**