This study focused on the effects of positive and negative affect induction on creative problem solving. Using an experimental design, participants were randomly assigned to one of two groups. Each of the groups completed two identical creative problem solving tasks. The experimental condition was one of differential affect induction through exposure to pleasant or unpleasant music. During completion of these tasks group one was exposed to pleasant music previously demonstrated to induce positive affect. Group two was exposed to unpleasant music during their task. Creativity was measured using a variety of objective and subjective rating methodologies established in the literature. I also assessed self-reported creativity in order to control for baseline creativity. Effectiveness of the affect induction procedure was measured through self-reported affect in a pre-test design.

This research provides a blueprint for future research to evaluate what impact of affect cues in an environment have on creative problem solving.

Objectives

- This study investigated the interaction of how an environment can influence a person’s affective state.
- This study examined how negative and positive affect induction affected the participant’s ability to creatively problem solve.

Methods

- Recruited students: Flyers, Class announcements
- 15 people participated in the study
- Pre-test, post-test experimental design
- Participants were randomly assigned to positive and negative affect groups.
- Consent form, demographic form, drawing form
- Affect was induced with music:
  - Positive affect: Bach’s Brandenburg Concerto No. 3
  - Negative affect: Prokofiev’s “Russia Under the Mongolian Yoke”
- Creative Behavior Inventory (CBI)- used as a baseline to measure past creative behavior.
- Positive and Negative Affect Schedule (PANAS)- self report measure of positive and negative affect.
- Vignette – test for fluency, flexibility, and originality; measure of creative problem solving.
- Test for Creative Thinking-Drawing Production (CTC-D-creativity)-complete an unfinished picture; measure for general creativity
- PANAS- used twice to measure affect before task completion and after task completion.

Measures

- Creative Behavior Inventory (CBI)- used as a baseline to measure past creative behavior.
- Positive and Negative Affect Schedule (PANAS)- self report measure of positive and negative affect.
- Vignette – test for fluency, flexibility, and originality; measure of creative problem solving.
- Test for Creative Thinking-Drawing Production (CTC-D-creativity)-complete an unfinished picture; measure for general creativity
- PANAS- used twice to measure affect before task completion and after task completion.

Participants

<table>
<thead>
<tr>
<th>Columns</th>
<th>Positive Affect Group</th>
<th>Negative Affect Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>25.14(5.10)</td>
<td>21.75(1.83)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Classification</td>
<td></td>
<td></td>
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<tr>
<td>Junior</td>
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<td>2</td>
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<tr>
<td>Senior</td>
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<td>5</td>
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<tr>
<td>Graduate Student</td>
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<td>1</td>
</tr>
<tr>
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<td>2</td>
</tr>
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<tr>
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<td>1</td>
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<tr>
<td>Hispanic</td>
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</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>CBI Total*</td>
<td>75.86(26.56)</td>
<td>64.88(35.41)</td>
</tr>
</tbody>
</table>

Note. Figures represent number of cases in each category except where specified below.

CBI=Creative Behavior Inventory

*Figures for CBI represent Means (Standard Deviations).

Results

- A repeated measures analysis of variance (ANOVA) test was used to evaluate the effectiveness of the affect induction by using the scores of the PANAS. The test showed that the results were not statistically significant, except for the interaction between the negatively induced group and time.

- Results were not statistically significant, except for the interaction between the negatively induced group and time.

Change in Positive Affect and Time Interaction

- The MANOVA yielded no significant results, showing there were no real differences between the two groups performances on the creativity tasks.
- Change in Positive Affect and Time Interaction

Future Directions

- A continuation of this study is being conducted for the 2010-2011 academic school year. Changes:
  - Larger Sample Size
  - Stronger Means of Affect Induction

References


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