## Background

Schellenberg, Peretz, and Vieillard (2008) propose in their discussion that people with
a negative affect and anxiety would like sad music. One reason may be from Sociala negative affect and anxiety would like sad music. One reason may be from Social Verification Theory, which was modified to state that people with depression like
stimuli that verify their negative self-views (Giesler, Josephs, \& Swann, 1996). Punkanen, Eerola, and Erkkila (2011), however, found that depressed and nondepressed individuals equally like sad music.
Both males and females in adolescence cope with depression using music (Kurdek, 1987), but males see coping as a private process (Warren, 1983). In fact, to cope with
depression, males often isolate themselves turn to addictive stimuli, such as drugs and depression, males often isolate themselves turn to addictive stimuli, such as drugs
sex. Females often address their feelings and cry to cope with depression (Kleinke, Staneski, \& Mason, 1982)

When it comes to individual differences in liking sad music, Garrido and Schubert (2011) had participants rate their general liking for sad music and compared these ratings to different individual, personality factors. About $50 \%$ of their respondents
reported liking sad music, and they determined that being high in absorption was the reported liking sad music, and they determined that being high in absorption was the
best predictor of liking sad music. Levinson (1997) states that people who absorb themselves into the music like it more, because being absorbed increases positively reinforcing outcomes more than not being absorbed.

## Purpose

Music therapy uses preferred music during treatments but typically uses Music therapy uses preferred music during treatments but typically
music that induces a positive mood in the client. Because musical music that induces a positive mood in the client. Because musical
preferences are highly individualized, our study determined to extend the preferences are highly individualized, our study determined to extend the
research by seeing if absorption and gender moderated depression and research by seeing if absorption and gender moderated depression and
anxiety's effects of liking sad music. By determining that depressed and anxiety's effects of liking sad music. By determing hat depressed and music effectively in their therapy sessions.

## Hypotheses

Step 1: Depression, Anxiety, Lassitude, and gender will positively predict liking sad music. For gender, males will like sad music more than females
Step 2: Depression, Lassitude, and Anxiety will each interact with Absorption and Gender. High absorption will increase liking more han low absorption as Depression, Lassitude, and Anxiety increase. Being male will increase liking more than being female as
Depression, Lassitude, and Anxiety increase.

## Method

Participants
e ) in this study with mean age of 22.34 (Range: $18-56$ ) and $88 \%$ of the sample was Caucasian

## Materials and Procedure

All of these respondents completed the entire Inventory of Depression and Anxiety Symptoms (IDAS; Watson et al. 2007) and the Absorption in Musi measure of liking sad music created by the researchers. This 3 -item measure utilized a 1 (strongly disagree) to 5 (strongly agree) scale, and the items were as follows:

I like songs that make me feel sadness or grief I like slow musi like dark and melancholy music

Figure 1


Figure 2


## General Depression

Table 1
Correlations

|  | Liking <br> Sad <br> Music | Lassitude | Social Anxiety | $\begin{gathered} \text { General } \\ \text { Depression } \end{gathered}$ | Absorption |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Liking Sad Musi | 1 |  |  |  |  |
| Lassitude | . 19 | 1 |  |  |  |
| $\begin{aligned} & \text { Social } \\ & \text { Anxiety } \end{aligned}$ | . 17 | . 36 | 1 |  |  |
| General | . 27 | . 72 | . 57 | 1 |  |
| Absorption | . 45 | . 12 | . 17 | . 15 | 1 |

In Step 1, Lassitude $(\beta=.14, t[455]=3.42, p=.001)$ and Absorption $(\beta=$
$t[455]=10.22 p<001)$ $t[455]=10.22, p<.001)$ positively predicted liking, but gender did not, $\beta=$.
$07, t[455]=1.58, p=.11$. These variables significantly explained $22.4 \%$ of th variance $F(3,455)=43.67, p<.001$
In Step 2, Absorption did not moderate Lassitude's ( $\beta=.39, t[452]=.1 .62$, $p=.11$ ) or gender's ( $\beta=.02, t(452)=.11, p=91$ ) effect on liking sad music Gender, however, moderated Lassitude's effect on liking sad music, $\beta=.42$,
$t[452]=2.98, p=.003$. As seen in Figure 2 males $(\beta=23,[477]=4.91$, $p<.001$ ) liked sad music more than females ( $\beta=.07, t[477]=2.59, p=.01$ ) Lassitude increased. These interactions significantly explained an increase in the variance, $\Delta R^{2}=.02, \Delta F(3,452)=3.66, p=.01$
In Step 3, the 3 -way interaction between gender, Absorption, and Lassitude was
nonsignificant, $\beta=.64, t(451)=1.03, p=.30$ It also did not explain a significant increase in the variance, $\Delta R^{2}=.002, \Delta F(1,451)=1.06, p=.30$.

## Social Anxiety

In Step 1, Social Anxiety $(\beta=.10, t[455]=2.35, p=.02)$ and Absorption $(\beta=.43, t[455]=10.20, p<.001)$ positively predicted liking, but gender did not, $\beta=.06, t[455]=1.34, p=.18$. These variables significantly explained $21.3 \%$ of the variance, $F(3,455)=41.07, p<.001$ In Step 2, Absorption did not moderate Social Anxiety's $(\beta=-.03, t[452]=-.13$,
$p=.90$ ) or gender's $(\beta=.04, t(452)=.20, p=84$ ) effect of liking $p=.90$ ) or gender's ( $\beta=.04, t(452)=.20, p=.84$ ) effect of liking sad mu
Gender also did not moderate Social Anxiety's effect on liking sad music, $\beta=.20, t[452]=.13, p=.90$. These interactions did not significantly explained an increase in the variance, $\Delta R^{2}<.00, \Delta F(3,452)=.03, p=.99$. In Step 3, the 3-way interaction between gender, Absorption, an Social Anxiet
was nonsignificant $\beta=-05, t(451)==10, p=92$. It also did not explain a significant increase in the variance, $\Delta R^{2}<.00, \Delta F(1,451)=.01, p=92$

## Discussion

n, lassitude, and social anxiety like sad music more than people low in the qualities. They support Giesler et al.'s (1996) modification to Self-Verification Theory, and they give empirical evidence supporting Shellenberg et al.'s (2008) theory that people with negative affect and anxiet would like sad music. If Shellenberg et al. (2008) is correct, then these effects could b
due to the song matching the respondent's mood (in depression) or the sad maics due to the song matching the respondent's mood (in depression) or the sad music's and anxious people like sad music, because it matches their self and world view

These results also support the past research on gender differences in coping strategies Perhaps men enjoy sad music more than women as depression increases, because musi provides men a coping strategy where they can isolate themselves but still engage in a stimulating activity

These results imply that sad music can be used in a music therapy setting for people wit anxiety and depression. Because they prefer sad music more as their depression increases, the session could start with the sad music to engage the client and slowl move to happier music, and that males with depression would benefit greatly. As Kleinke et al. (1982) suggests that males with depression may benefit from active coping, perhaps males would need an active music therapy session involving sad music Lee, Lim, 2008; Erikkla et al., 2011), but more research needs to be done to test sad music's effectiveness in this setting.

