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# The Efficacy of Live Music Therapy on Stress, Anxiety, and Depression Among College Students and Working Adults

**Annalisa Hopper**  
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## Introduction

- There are an estimated 264 million people living with Anxiety Disorders, and an estimated 322 million people living with Depression (WHO, 2017).
- Live music has been found to be more effective than recorded music in decreasing anxiety levels in cancer patients and patients with mental health disorders in various studies (Bailey, 1983; Ferrer, 2007).
- Chiasson et. al (2013) demonstrated that patients observed in an intensive ward unit experienced a decreased pain by 27% when exposed to live spontaneous harp music.
- This study aims to explore how frequent exposure to live & recorded music can be therapeutic to help cope with stress, anxiety, and depression.

## Hypotheses

This research question intended to understand:

- If people who attend live music events have lower stress, anxiety, and depression than people who do not attend live music events.
- If the amount of live music that someone listens to is negatively correlated with stress, anxiety and depression.
- If the amount of recorded music that someone listens to is negatively correlated with stress, anxiety and depression.

## Methods

### Participants

N= 55 = 44 (80%) Women ; 11 (10%) men

### Measures

#### Live and Recorded Music Frequency Scale

The first scale asked each participant about their age, gender, and the frequency for live music attendance throughout the year, and of listening to recorded music throughout the day. This scale also assessed whether the participants preferred attending concerts more or less than just listening to recorded music to alleviate stress.

#### Perceived Stress Scale

The **PSS** is a commonly used measure to evaluate the perceptions of stress. Items were designed to evaluate how unpredictable situations made them feel, and how much negative pressure respondents find aspects of their life to be in the last month.

#### Depression Anxiety Stress Scale

The **Dass-21** was designed to measure severity of stress, anxiety, and depression. The DASS Depression Scale records feelings of low mood and energy, lack of motivation, & self esteem, while the DASS Anxiety Scale records perceptions of panic, worry, & fear.

## Results

- Pearson's R Correlation was used to find that there is a marginally significant relationship that was found in the way frequent live music attendees coped with stress, in the mean PSS scores  $r(54) = -.231, p=.09$
- There was no significant correlation between frequent live and recorded music listening, and coping with stress, anxiety, and depression, between groups of frequent live & recorded music listeners, and those who do not listen to either, in the three scales within the DASS.
- No statistical difference between live & recorded music listeners, and nonlisteners was found in the compared mean scores of PSS ( $t(53)=.757, p=.752$ ); in the mean scores of the Dass Depression Scale ( $t(53)=.155, p=.157$ ); in the mean scores of Dass Anxiety Scale ( $t(53)=-.457, p=.454$ ), and in the Dass Stress Scale mean score ( $t(53)=-.719, p=.718$ ). There were also no statistically significant differences between sexes in coping with stress anxiety, and depression.

(The mean scores of each scale for Live Music Listeners and Recorded Music Listeners are represented in the charts

	Live Music	PSS	DassD	DassA	DassS
Live Music	-	<b>-0.231</b>	<b>-0.12</b>	<b>0.045</b>	<b>-0.003</b>
PSS		-	<b>.775**</b>	<b>.655**</b>	<b>.705**</b>
DassD			-	<b>.704**</b>	<b>.741**</b>
DassA				-	<b>.754**</b>
DassS					--

	Recorded Music	PSS	DassD	DassA	DassS
Recorded Music	-	<b>-0.207</b>	<b>-0.142</b>	<b>-0.008</b>	<b>-0.033</b>
PSS		-	<b>.775**</b>	<b>.655**</b>	<b>.705**</b>
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DassA				-	<b>.754**</b>
DassS					-

## Discussion

- The marginally significant relationship found in the lower mean scores of the PSS of live music attendees, show that attending live music has a slight negative correlation with stress.
- Only 9 participants (16%) of recorded music listeners listened to high amounts of recorded music (7-11hrs), and only 3 (.05%) participants didn't go to live music concerts, which shows that the small sample size was a limitation in finding significant differences in mean scores.
- Self-reported surveys administered during tax season, and the rainiest winter-spring season in the Bay Area in years, might've had an effect on stress, anxiety, and depression levels. Seasonal Affective Disorder can have an effect on moods.
- Another limitation is the lack of racial and socio-economic diversity of the participants.
- Other limitations were that honest reporting on self-reported surveys are seldom completely accurate. And it's questionable accurate self-reporting was possible in the off-season of concerts and music festivals, whereas reporting took place in the winter & spring season.

## Conclusion

- A between-groups experiment where a pre and post-test condition is administered and participants are directly exposed to the experimental conditions of live and recorded music, would most likely yield results more supportive of the hypotheses.
- Recent studies have found that music therapy has often been used as an alternative therapy to bridge the gap between home treatment, and hospitalization for people suffering with mental health disorders. (Luebner & Hinterberger, 2017).
- This alternative treatment would be viable to use in addition to current standard treatment protocols, which could be more effective in helping treat anxiety and depression.
- More research into music therapy is necessary because stress-related illnesses like heart disease, high blood pressure, anxiety, depression, cancer, and stomach illnesses are pervasive endemics in America today, with average statistics of people living with each illness.



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