Effects of Keyboard Music Making on the Mood States of University Students

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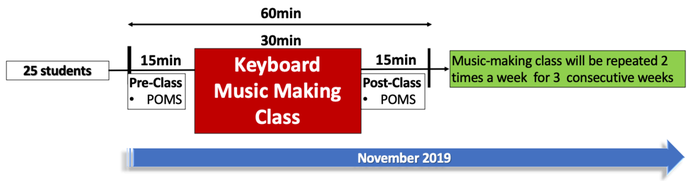
INTRODUCTION

We hypothesized that the undergraduate students to their mood states. exposed to the keyboard music-making classes would experience significant improvements

Aim 1: to develop a **novel** keyboard **music-making curriculum** to actively engage non-musician university students

Aim 2: to assess the effect of the **group keyboard music-making classes** on the **mood states** of study participants by using a well-established Profile of Mood States—Short Form (POMS-SF) questionnaire

EXPERIEMENTAL PARADIGM & METHODS



PROFILE OF MOOD STATES – SHORT FORM

Attributes					
Positive	Negative				
Vigor	**Depression**	**Confusion**	**Tension**	**Anger**	**Fatigue**
Lively	Unhappy	Confused	Tense	Angry	Worn-out
Active	Sad	Unable to	On Edge	Peeved	Fatigued
Energetic	Blue	Concentrate	Uneasy	Grovely	Exhausted
Cheerful	Hopeless	Bewildered	Restless	Annoyed	Weary
Full of Pep	Discouraged	Forgetful	Nervous	Resentful	Bushed
Vigorous	Miserable	Uncertain	Anxious	Bitter	
	Helpless	about things		Furious	
	Worthless				

RESULTS

Clustering of Students Based on Their POMS Scores

A Principal Component Analysis (PCA) of the POMS *pre-intervention* scores showed that all participants can be divided into two subgroups: "A", green circles; and "B", black circles.

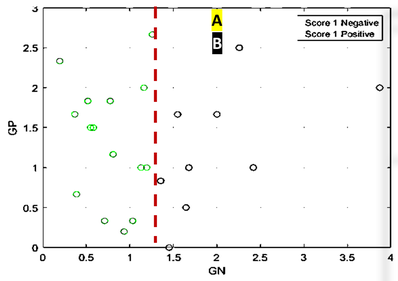
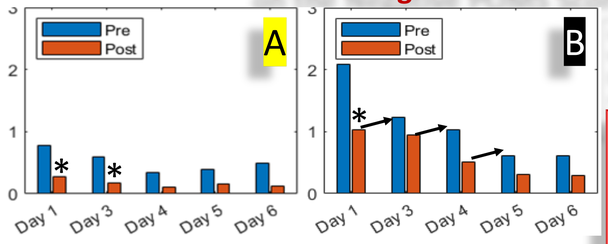


Figure
groups
(blue c

- Subgroup B (n=9) had high negative POMS attributes (cumulative scores for ***depression, confusion, tension, fatigue and anger***) (average score = 2.09), while subgroup A (n=16) had low negative POMS attributes (average score = 0.7).
- The difference between the average POMS scores in the two subgroups is psychologically meaningful, suggesting that subgroup B had significantly higher levels of ***depression, tension, confusion, anger and fatigue*** compared to group A, before their music-making sessions began.

The Effect of the Keyboard Music-Making Activity on the Negative POMS Scores

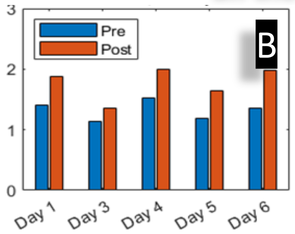


In both subgroups of students (A; B), the average negative POMS scores (blue bars) were smaller after music-making sessions (red bars).

- **Students in both groups were feeling less *depressed, tense, confused, angry and fatigued* after the group music-making sessions.**
- **Beneficial effects persisted for a week after music-making sessions (black arrows).**

The effect of keyboard music-making on negative POMS scores (cumulative scores for ***depression, confusion, tension, fatigue and anger***) were assessed on week 1 (Day 1), week 2 (Days 3 and 4) and week 3 (Days 5 & 6). *p<0.001

The Effect of the Keyboard Music-Making Activity on the Positive POMS Scores



- Average POMS scores for positive attributes ('vigor") in the B subgroup.
- In the A group, students had very high positive *baseline* scores, and expectedly music-making activity did not affect them.

- **POMS scores for the positive POMS attribute "vigor" were higher after each music-making session.**
- **The small sample size is likely responsible for the lack of statistical significance between pre- and post- music-making session POMS scores.**

CONCLUSION

In sum, our data indicate that this *group keyboard music-making activity* has a lasting positive, and psychologically beneficial effect on the *mood* of undergraduate non-musician students.

FUTURE PLANS

Study the effect of music-making experience on the mood of students during Covid-19 induced isolation

Study the effect of keyboard music-making versus music listening on the mood states of university students

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