Kimberly R. Mayes[1], Lisa M. Paciulli[1], McKenzie N. Jevnikar[1], and Ansley F. Fondow[2]

[1]Department of Biological Sciences, [2]Department of Mathematics and Education

Gauging Undergraduates' Emotions with Bi-Weekly Coloring Wellness Check-ins in a Synchronous Introductory Biology Zoom Class

Students experienced a significant decrease in positive emotions (p<.05) and a (non-significant) increase in negative emotions.

Introduction:

- COVID-19: Increase in mental health issues[1]
- Coloring a pre-drawn image can help reduce stress[2]
- Sharing with others helps alleviate anxiety[2]
- Creation of positive classroom environment = student success[3]

Research Question: *Do the colors students use to represent their emotional state change over the course of a semester, and if so, how?*

Methods:

- IRB Protocol 23789
- Biweekly: Mandala presented with Zoom screen share function to Introductory Biology students.
- Students collectively colored mandala using 6 colors (emotions)
- Asked: "Why is there so much X (color) present in the mandala today?"
- Students' responses noted
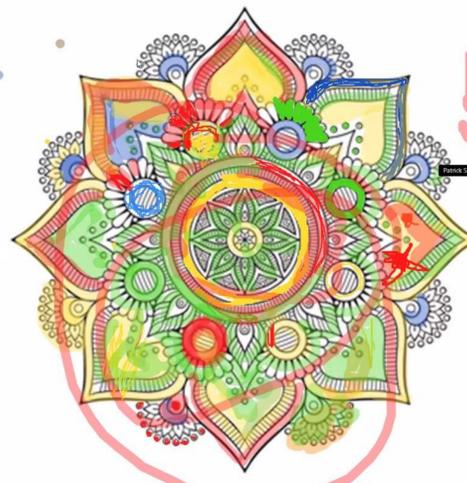- Percent of each color calculated
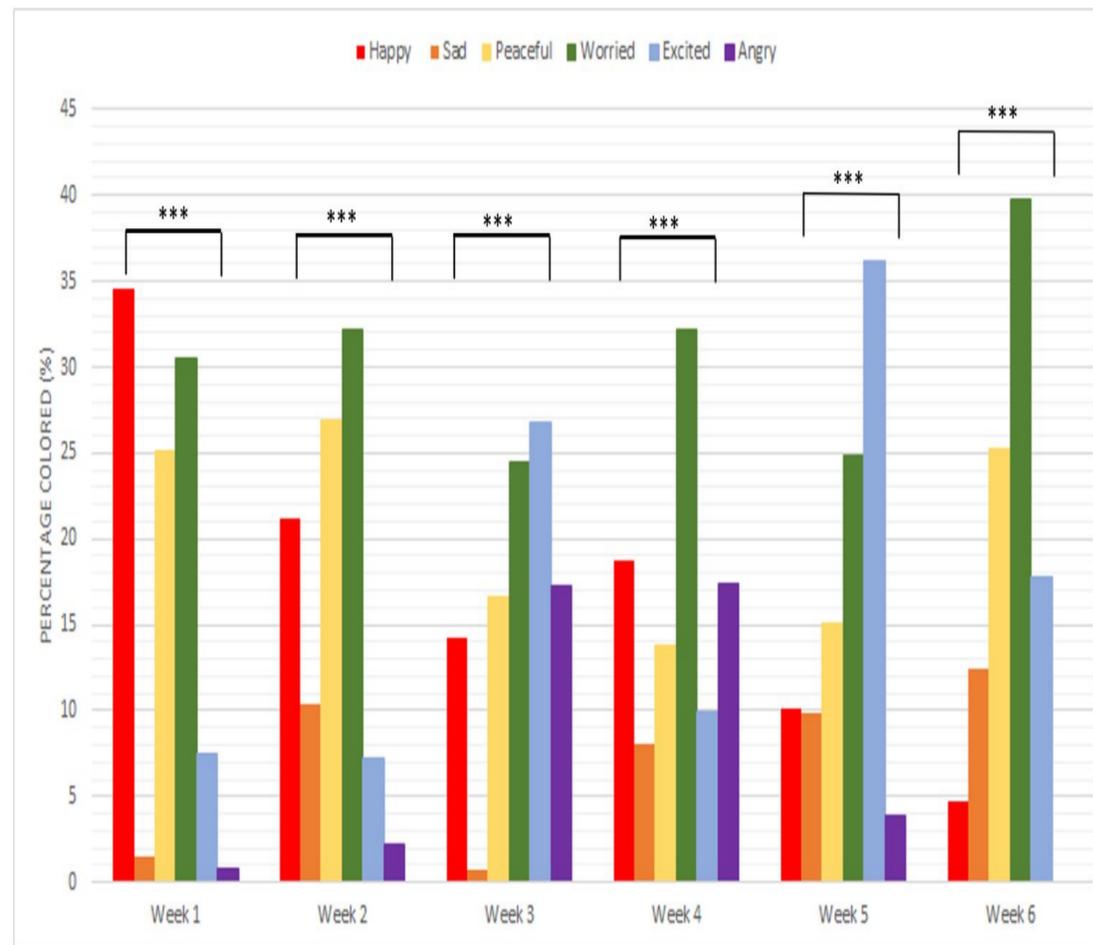
Discussion:

- As semester progressed, students had more negative emotions.[4]
  – Academic stress + COVID
- Benefits:
- Can gauge classroom mood bi-weekly
- Can adjust content, method of teaching, extend due dates as needed

Future Research: Continue wellness check-ins; use a variety of different types, especially validated ones like Circumplex of Emotions[5].

References:
1. Huckins *et al.* 2020. Mental Health and Behavior During the Early Phases of the COVID-19 Pandemic: A Longitudinal Mobile Smartphone and Ecological Momentary Assessment Study in College Students. May 4.
2. Curry & Kasser 2005. Can coloring mandalas reduce anxiety? Art therapy: Journal of the American Art Therapy Association 22(2):81–85.
3. Pickett & Fraser 2010. Creating and assessing positive classroom learning environments. Childhood Education 86(5):321–326.
4. Mansour & Mupinga 2007. Students' positive and negative experiences in hybrid and online classes. College Student Journal 41(1):242.
5. Russell JA. 1980. A circumplex model of affect. Journal of Personality and Social Psychology 39:1161–1178.

Add color based on how you are feeling!
Happy
Sad
Peaceful
Worried
Excited
Angry