Exploring the Influence of Grief on Color Preference: An Empirical Test on Color-in-Context Theory's Fifth Premise

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Introduction

- Past studies showed an association between grief and music preferences (slow tempo and melody play a role in emotional healing) (McCurry et al., 2019).
- Research found links between Major Depressive Disorder (MDD) and visual color deficiencies (e.g., reduced contrast gain – the sensitivity to color and brightness differences) (Bubl et al., 2010).
- The Color-in-Context Theory's 5th premise suggests that psychological states can dictate color perception (Elliot & Maier, 2012).
- This study aims to explore how negative mood during grieving process affects color perception and preferences.

Methods

Participants

- 60 adults (M = 25.21 years, 59% women) who experienced a loss 1-6 months prior.
- Pre-screening involved - those with color vision deficiencies and prolonged grief disorder were excluded.

Material

- A total of 8 abstract images - generated by ChatGPT (see Figure 1).
- Images' hue, saturation, and lightness were adjusted using Adobe Photoshop.
- Score range: 0-360 degrees for hues | 0% - 100% for saturation | -100% to 100% for lightness. (see Figure 2)

Note: 'lightness' level in Photoshop range from -100% to 100%, which is different from demonstration shown in Figure 2.

Figure 1.

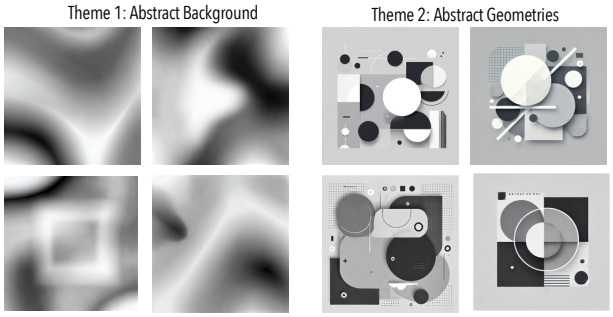
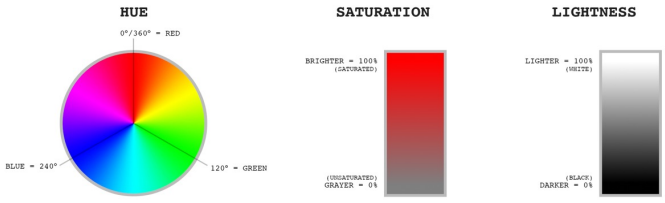


Figure 2.



Credit: Alvaro Montoro on *HSL*. https://alvaromontoro.com/blog/67871/hsl

Procedures

Deception: participants were told that the two tasks (color preference task (CPT) and autobiographical recall) were for different purposes.

1. CPT1 (Color Preference Task 1): participants adjusted hue, lightness, and saturation of a series of 4 images (2 backgrounds + 2 geometries) according to their preferences.

Deception: we introduced 'loading issue' – led participants to believe that CPT1 and CPT2 were identical – to minimize potential demand characteristics.

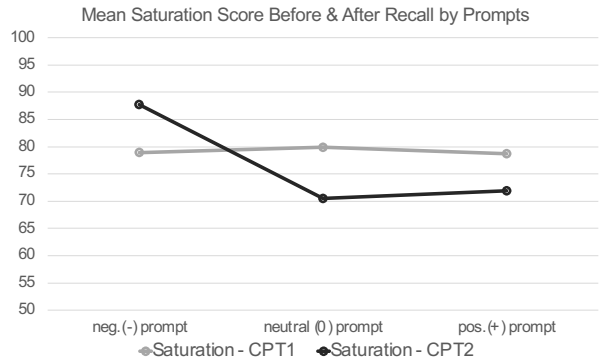
2. Autobiographical Recall: participants were assigned to one of three conditions – negative, neutral, or positive prompts – with an emotional intensity of 7 on a 1-10 scale for negative and positive prompts. All were given 30 minutes to respond.
3. CPT2 (Color Preference Task 2): same as CPT1 on 4 other images (2 backgrounds + 2 geometries)

Disclaimer

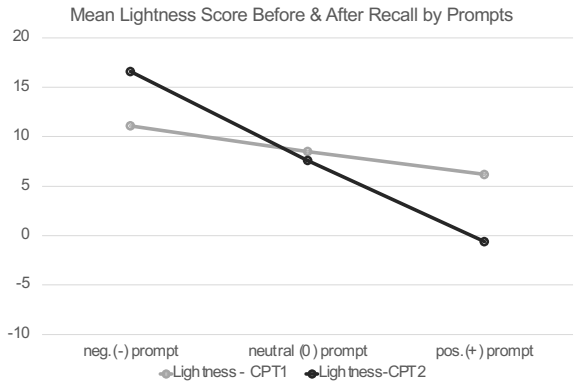
This research study was part of Research Methods (PSYC 0202) project at Middlebury College. Data presented here were fabricated and have no real-world applications. The work received reviews from Professor Mathew Kimble and classmates.

Results

SATURATION: There was a significant main effect of recall type on saturation preference, $F(2,27) = 3.39$, $p < .05$. We also found a significant interaction effect between time of task and type of prompts on participant's score, $F(2,27) = 3.626$, $p < .05$.



LIGHTNESS: There was a significant main effect between-subject of recall type for lightness, $F(2,27) = 3.64$, $p < .05$.



Discussion

Findings

- Emotional stimuli significantly influenced color preference in two components: saturation and lightness. No significant effects of hue were found.
- Specifically for negative stimuli, lower mood is associated
- Bubl et al. (2010) demonstrates that depressive symptoms are correlated with diminished contrast processing.
- Given that grief processing also include symptoms of depression (Maciejewski et al, 2007), negative cues can amplify depressive mood and thus lead to temporary shifts in visual functioning. Such changes thereby prompt individuals to adjust their visual preferences to compensate for the lost in perceptual details.

Limitations

- Due to small sample size (60 participants) and restrictions on non-healthy-bereaved individuals as well as those with color vision deficiency, our results cannot be generalized into larger population.
- Confounding variable: We did not record the amount of time participants spent during the autobiographical recall task, which may have provided us with essential information related to subjective amount of distress experienced and subsequent color ratings.

References

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