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The Influence of Themed Images on Word Associations

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LITERATURE REVIEW

The Priming Theory suggests that prior exposure to stimuli shapes how we think and feel in response to the stimuli (Ratcliff & McKnoon, 1988).

Priming helps form mental associations between emotions and visuals (Sutton & Altarriba, 2009). Studies show visual primes shape how we interpret words and emotional meaning (Bruno et al., 2020; Sassi et al., 2014; Zhu & Takeda, 2023).

Zhu and Takeda (2023) demonstrated that emotional responses to a stimulus can shape mental associations, especially when the task aligns with the emotion. In their study, Sassi et al. (2014) found that the more attention participants gave to emotional faces, the stronger the priming effect became.

This current study explores how emotional images shape word completion. By using a word fragmentation task, it reveals how visual primes and emotional context influence our cognitive and linguistic choices.

It was hypothesized that participants who are primed with darker-themed images, compared to lighter-themed images, will report more pessimistic word associations.

METHODS

Participants:
A total of 98 participants took part in this study and were assigned to one of two conditions.

Group 1: Light-Themed condition
There was a total of 47 (48%) participants. There were 10 males, 33 females, 3 non-binary, and 1 who did not say. Most participants were KPU students (94%) and between the age of 18-21 (64%).

Group 2: Dark-Themed condition
There was a total of 51 (52%) participants. There were 11 males, 38 females, 1 non-binary and 1 who did not say. Most participants were KPU students (84%) KPU and between the age of 18-21 (61%).

Materials:
The visual primes were three light or three dark-themed images.

Light-themed images were brighter colored pictures which are stereotypically associated with positivity. An example image of a young girl smiling (smiling indicates positive mood) - Please see Figure 1.

Dark-themed images were dim and gloomy pictures which are stereotypically associated with negativity. An example image of a skull (skulls represent death which indicates negative mood) - Please see Figure 2.

Figure 1
Young girl smiling

Figure 2
Image of Skull

METHODS CONT'D

To measure word associations, participants completed a 10-item word fragment task (e.g., g _ _ ss). Responses were categorized as positive or negative based on common societal interpretations (e.g., "coffin" = negative).

Procedures:
First, the participant completed the electronic consent form and they answered the three demographic questions.

They were then randomly assigned to either the light-themed or dark-themed images.

They were asked to look at the images corresponding to their condition for a minimum of 30 seconds.

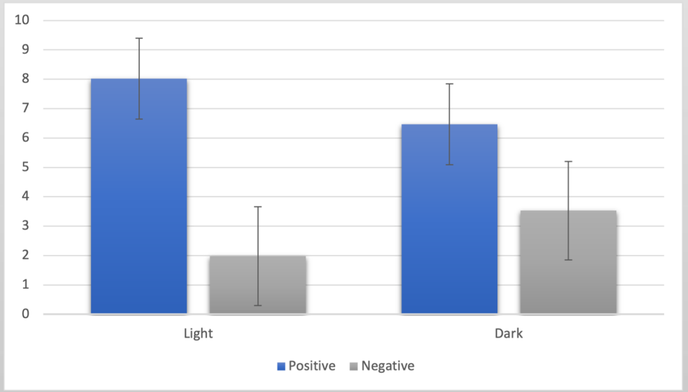
Lastly, they were instructed to complete the word fragment task by creating 10 complete words.

RESULTS

A paired independent samples t-test was conducted, comparing the effects of light and dark-themed images on positive and negative word associations. Please refer to figure 2 for M and SD.

We found a significant statistical difference between the means in which those in the dark themed condition yielded greater negative word associations than those in the light themed condition and the effect size showed a medium effect: $t(98) = 4.98$, $p < .001$, $r^2 = 0.21$.

Figure 2
Means and Standard Deviations of Positive and Negative Word Associations in Both Conditions



DISCUSSION

Participants shown darker-themed images produced more negative word completions than those shown lighter-themed ones.

These results support prior studies (e.g., Sutton & Altarriba, 2009; Kim et al., 2014) showing emotional stimuli influence cognitive responses.

An implication is that visual stimuli can steer language use, which may impact areas like witness testimony and educational settings.

Certain limitations to this study include that the image selection was based on assumed stereotypes, and the online setting lacked control over participants' environments.

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Acknowledgements