

THE EFFECT OF THE COLOR RED ON AVOIDANCE MOTIVATION

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Results of recent studies suggest that the color red induces an avoidance motivation. Elliot and his colleagues (e.g., Elliot, Maier, Binsler, Friedman, & Pekrun, 2009; Elliot, Maier, Moller, Friedman, & Meinhardt, 2007; Maier, Elliot, & Lichtenfeld, 2008) have conducted a series of experiments demonstrating that participants who were presented with the color red in an achievement context exhibited responses that indicate avoidance motivation. These included impaired task performance, preference for an easier task, local focus of attention, bodily movement away from the stimulus, right prefrontal cortical activity, and so forth (see also Mehta & Zhu, 2009).

In this study we examined the effect of the color red in a more ecologically valid situation than those in previous research. We tested whether the color of the experimenter's shirt can induce avoidance motivation in participants. A total of 63 Japanese undergraduates (30 males and 33 females; mean age 18.71 years; range 18–20 years) participated in the experiment in exchange for a partial course credit. They were randomly assigned to either a red, white, or green color condition. The color was manipulated using the color of the experimenter's shirt. They were able to observe the shirt below the collar of the experimenter's white coat. When the experimenter described the ostensible analogy task, participants could consciously or unconsciously see the shirt for a maximum of 1.5 minutes. The participants were instructed that the analogies used in this task were classified into two types according to their level of difficulty: easy and moderately difficult. They were then asked to answer 10 analogies and indicate the respective numbers of easy and moderately difficult analogies that they would

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like in the test (see Elliot et al., 2007). The number of easy analogies selected by participants was used as a marker of avoidance motivation. In the final debriefing none of the participants realized that the experiment was focused on assessing the relationship between color and performance.

Data were analyzed by conducting a between-subjects analysis of variance (ANOVA), using the number of easy analogies as the dependent variable. The analysis revealed that the color condition affected task choice, $F(2, 60) = 3.57$, $MSE = 1.87$, $p < .05$, $\eta_p^2 = .11$ (see Figure 1 for mean number of items by color condition). Planned comparisons indicated that participants in the red color condition chose a greater number of easy items than did those in the green color condition, $t(40) = 2.81$, $p < .01$, $\eta_p^2 = .16$; and white color condition, $t(34.8) = 1.87$, $p < .10$, $\eta_p^2 = .08$. Moreover, participants in the green and white color conditions displayed comparable levels of task choice, $t(39) = .71$, $p = .48$.

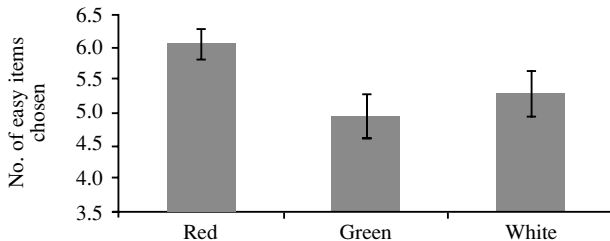


Figure 1. Effect of color on anagram item choice. Mean and standard error of the number of easy items chosen with regard to color of experimenter's shirt.

The above data support results of previous research suggesting that the color red can activate an avoidance motivation. As the shirts used in the experiment were selected from a public sale, there was limited control over the hue, lightness, and chroma of their color. A well-controlled examination of various methods of color presentation across different contexts is required in future research in order to make practical applications of the color effect in daily life.

Keywords: color, red, avoidance motivation.

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