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Kayleigh-Farrell Crow
Dominican University of California

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The Relationship between Emotional Contagion and Mood State

Kayleigh Crow

Dominican University of California

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Introduction

Emotions can be contagious. We can catch someone's bad day bug or have a better mood after seeing someone smile. It has been assumed that the strength and impact of contagious emotions can depend largely on the susceptibility of the individual. While emotional susceptibility is presumed to be the unconscious component of being affected by others' emotions, possible attitude changes are believed to occur on a conscious level. The purpose of this study was to examine cognitive strategies for controlling emotional contagion. Emotional contagion has been defined as "the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person, and, consequently, to converge emotionally" (Hatfield, Cacioppo, & Rapson, 1993, p. 96). Rempala (2013) considered strategies for limiting susceptibility to the influence of emotional contagion. The study consisted of 152 undergraduate students (49 males, 103 females) with a mean age of 23.0 years (SD = 4.5). Participants first arrived at a laboratory, where they received a consent form that included a brief description of the experiment. Next, participants received a set of instructions that described the tasks in greater detail and also incorporated one of four sets of listening instructions (one of three emotional-regulation strategies and one control condition). Participants watched either three video clips of happy "clients" or three video clips of sad "clients". After watching and responding to each clip, participants answered questions about their own affective state and the perceived state of the "client". Participants completed a manipulation check before being debriefed. The results of this study support the idea that emotional regulation strategies can impact emotional contagion. This study also established that the sad clip condition was more emotionally contagious. The present experiment examined the strength and influence of certain emotions and the likelihood for contagion to occur. This study also explored the relationship between individual differences in emotional susceptibility and the potential for mood change.

Hypotheses

It was hypothesized that 1) emotionally susceptible people should score high on a mood scale after watching an emotionally charged video clip, 2) sadness will have a more contagious effect, and 3) females score higher than males in emotional contagion.

Method

Participants

- N=32; 21 women and 11 men
- Ranging in age from 18 to 43 years (M=23.6 years, sd=6.2 years)
- Student participants recruited from Dominican University of California; demographic data collected was a reflection of typical student population

Materials and Procedure

- Participants received an email containing a letter of introduction and instructions on how to select one of six links to the survey via SurveyMonkey.com
- Demographic questions
- Emotional Contagion scale (ECS; Doherty, 1997); participant self-report to 15 items
 - Five subscales measuring susceptibility to contagion: happiness, love, fear, anger and sadness (Doherty, 1997)
 - Emotional Contagion score was gathered from Likert scale responses (where 5=Always and 1=Never)
- Participants watched one of six randomly selected video clips (from youtube.com) that depicted either a male or female expressing one of three conditions: a happy, sad, or neutral emotion (See Figure 1).
- Finally, participants asked to complete a total of 13 questions about their mood state from the Positive and Negative Affect Schedule-Expanded Form (PANAS-X; Watson & Clark, 1994)
 - Via two subscales measuring happy and sad mood states (5 questions from the Sadness subscale, 8 questions from the Joviality subscale)
 - Mood state score was gathered from Likert scale responses (where 5=Always feel this way and 1=Never feel this way)
- All data collected through surveymonkey.com for confidentiality purposes

Figure 1. Photo Series of Emotional Conditions



- **Hypothesis 1:** Emotionally susceptible people would score high on a mood scale after watching an emotionally charged video clip. To test this hypothesis, results from those participants who scored high on the emotional contagion scale, indicating higher emotional susceptibility, and was correlated with their mood state score.
 - A Pearson correlation coefficient was calculated between these variables, and the results showed that there was a significant, positive correlation between those who scored high in emotional susceptibility (ECS) and a positive mood state, $r(26)=.45, p<.05$.
 - For a breakdown for ECS subscales, See Table 1; There was a significant, positive correlation between positive mood state and susceptibility to happiness, $r(26)=.45, p<.05$; susceptibility to fear, $r(26)=.42, p<.05$; and susceptibility to anger, $r(26)=.46, p<.05$.

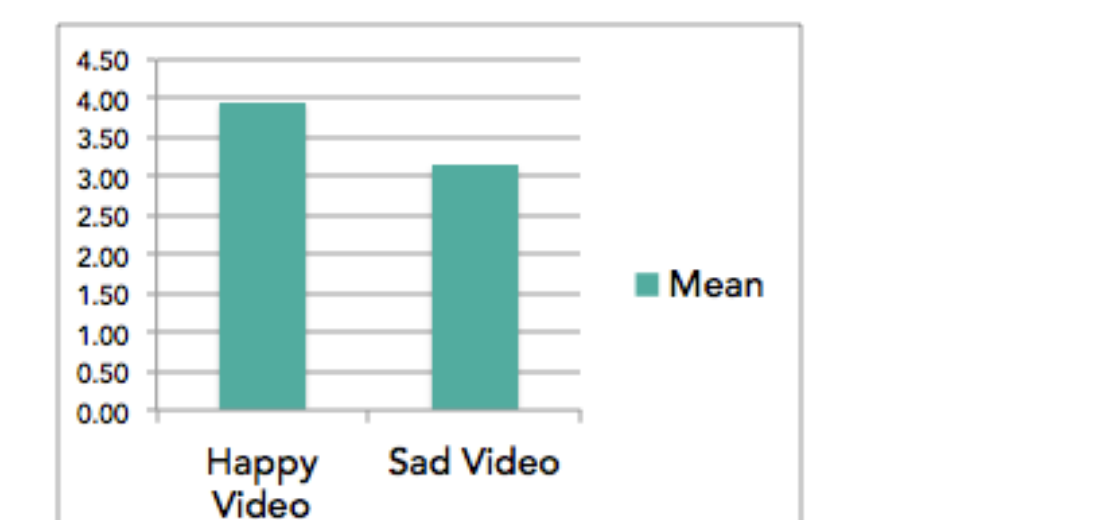
	Happiness	Love	Fear	Anger	Sadness
Positive Mood State	0.45*	0.02	0.42*	0.46*	0.22
Negative Mood State	-0.21	-0.06	-0.02	-0.19	-0.06

* Correlation is significant at the 0.05 level (2-tailed).

Results

- **Hypothesis 2:** The second hypothesis was that overall, sadness would evoke higher instances of contagion. To test this hypothesis, an Independent Samples t-test was used to measure mean differences of happy mood state scores with those who saw the happy video clip and sad mood state scores for those who saw the sad video clip, $t(15)=1.96, p>.05$. There was no significant difference between a happy mood for those who saw the happy video and a sad mood for those who saw the sad video (See Figure 2).
 - To test the mean differences in mood state score among the three emotional conditions (video clips), a one-way ANOVA was used. Those participants who watched the happy video clip reported higher means of a positive mood state than participants who watched the sad video, $F(2,25)=13.38, p<.05$. Those participants who watched the sad video clip reported higher means of a negative mood state than participants who watched the happy or neutral video, $F(2,24)=4.94, p<.05$ (See Figure 3).
- **Hypothesis 3:** The third hypothesis was that females would score higher than males in emotional contagion. Women reported a higher mean susceptibility score to fear and sadness than men (See Figure 4).
 - The mean emotional susceptibility score of women was higher than of men, $t(28)=2.21, p<.05$. Women also reported higher emotional susceptibility scores for sadness than men, $t(28)=4.51, p<.05$.

Figure 2. Independent Samples T-Test between Emotional Content in Video and Corresponding Mood State



Positive mood state was compared with viewers of the happy video; Negative mood state was compared with viewers of the sad video.

Figure 3. Mean Differences between Emotional Content in Video Clip and Mood State

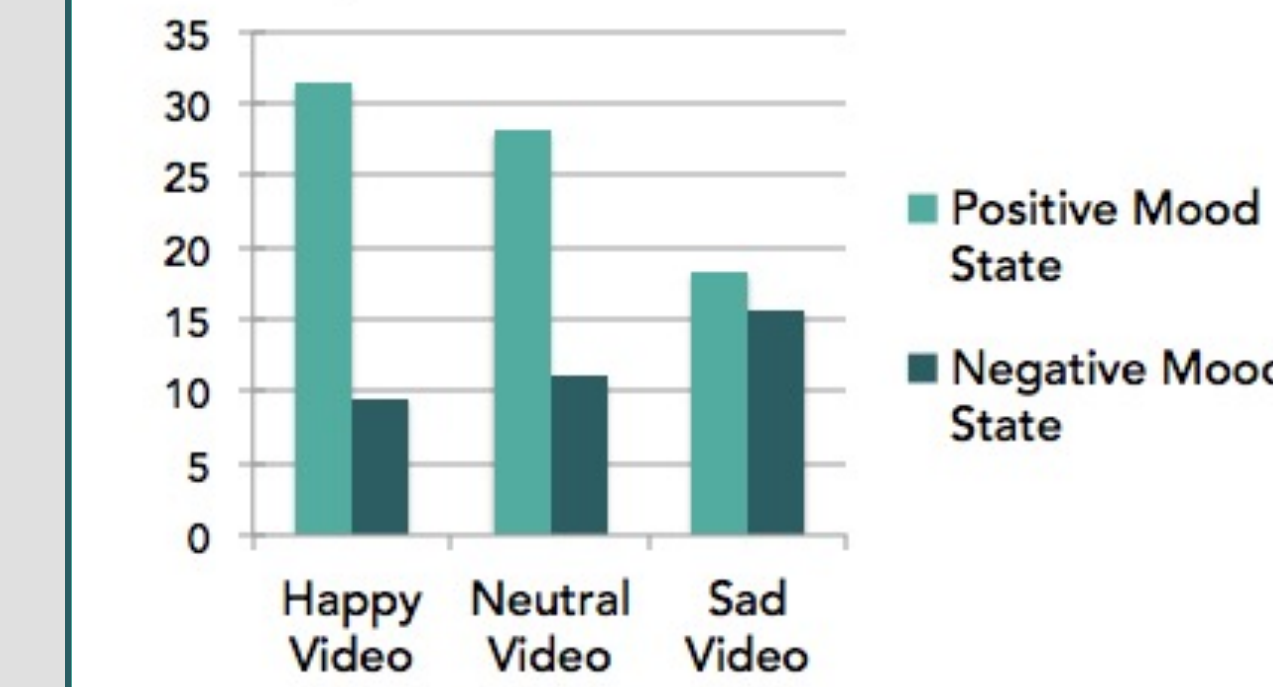
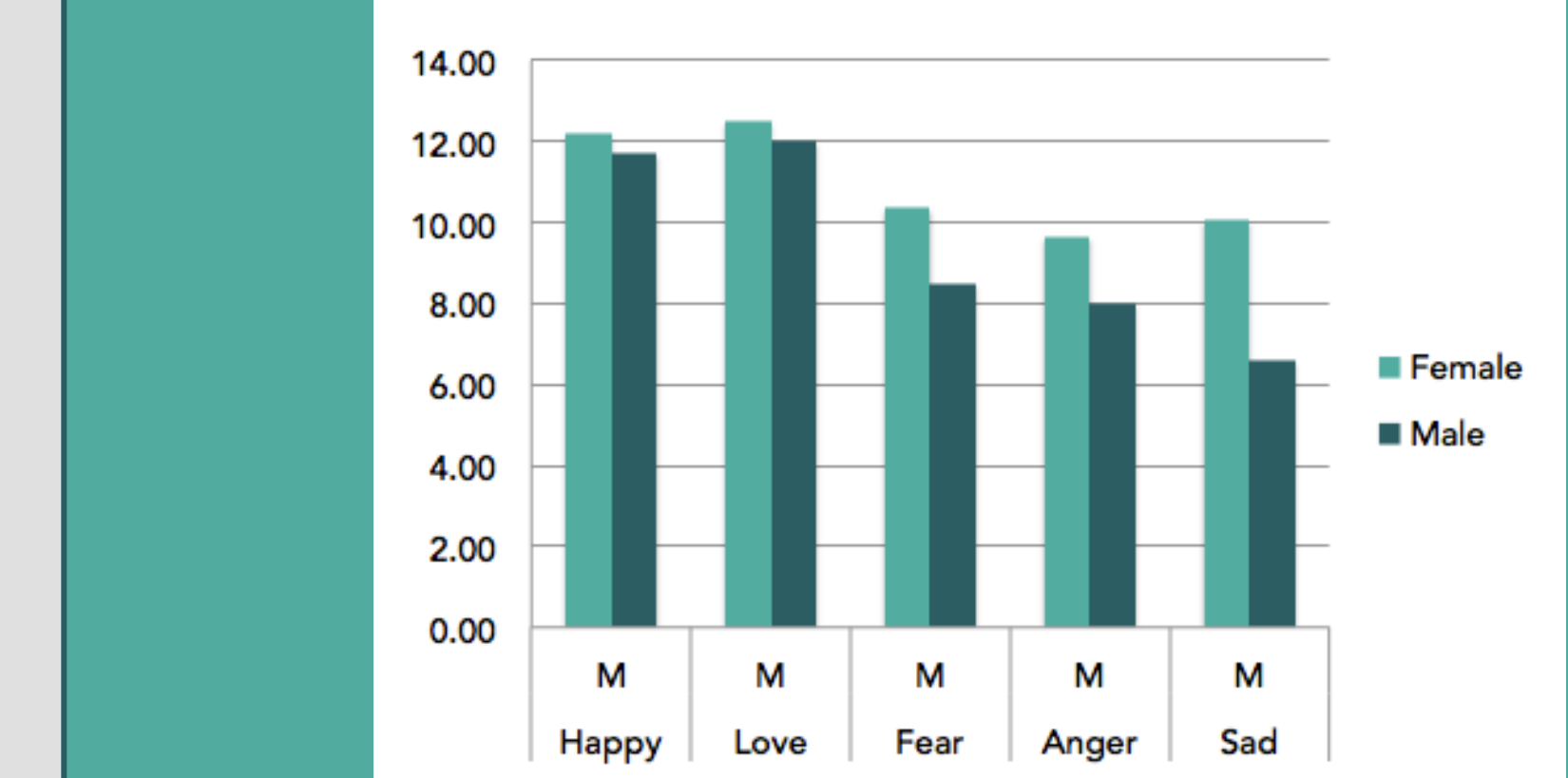


Figure 4. Independent Samples T-Test between Susceptibility to Emotional Contagion and Gender



Conclusions

- This experiment provided reliability for the Emotional Contagion Scale (ECS) in that positive mood was found to be related to emotional contagion.
- **The first hypothesis can only be partially confirmed;** There was a positive relationship between positive mood state and susceptibility to happiness, fear and anger, however, negative mood states were not significantly related to any of the emotional contagion scales.
- **The second hypothesis was also partially confirmed;** Participants' mood were affected by the emotional clip: when watching a happy video, people tended to report a similar mood state. Overall, however – the sad video was not more contagious than the happy video clip.
- Women reported being more susceptible to fear and sadness than men do. This conclusion provides **partial support for third hypothesis** because the results are only true for fear and sadness. A possible explanation to this trend may be the way in which gender roles can often have an influence in the degree to which genders feel comfortable expressing emotional/affective states.
- If future research were to be conducted and the trend continued, a larger sample size might have yielded more significant results.

References

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