The Interaction between Mood, Music, and False Short Term Memories

Hannah Westphal and Amanda Martin, B.S.,
Faculty Advisor: Dawn M. McBride, Ph.D., Department of Psychology
Illinois State University

Introduction

• Present study aims to measure the relationship between induced moods, list types, and how these variables affect short term false memory.
• DRM paradigm used: experimentally creating simple false memories for words before completing a memory task.
• Past studies (e.g., McBride et al., 2019) have shown that at short-term delays, false memories are more frequent for phonological than semantic lists
•Hypothesis: Studied phonological lists will yield higher false recognition rates than studied semantic word lists, especially when participants are in a positive mood, thus indicating that STM errors are due to focusing on relational information at study when in a negative mood.
Researchers have found significant effects of mood and false memory suggesting that when in a negative mood, lower false recognition rates are produced (Storckbeck & Clore, 2005; Zhang et al., 2016)

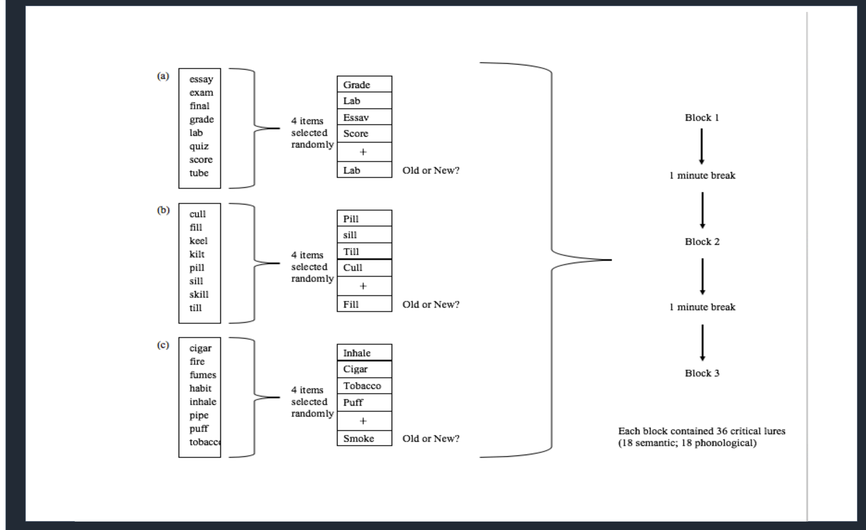
Current Study

• Purpose: Observe the effects of positive and negative moods on false memory, while also observing the effect on false recognition from studying semantically or phonologically related word lists
• H1: Individuals in the positive mood group will have higher rates of false recognition than those in the negative mood group
• H2: Individuals who study phonologically related word lists will have higher rates of false recognition when in positive moods compared to individuals who studied semantically related word lists in negative moods.

Method

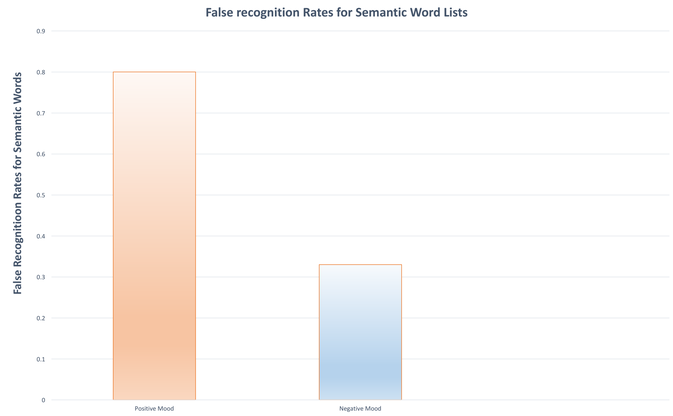
• Participants: 50 participants will be assigned into the positive mood condition, and 50 participants will be assigned into the negative mood condition through a random assignment.
• Design: All participants will receive a negative or positive mood induction through the use of two classical music pieces. Participation will completed through the online Gorilla software.
Materials: Participants in positive mood group listened to *Eine Kliene Nacht Muzik* by Mozart. Participants in negative mood group listened to *Adagietto* by Mahler. Participants were then asked to perform recognition task from the pre-approved word lists for each condition

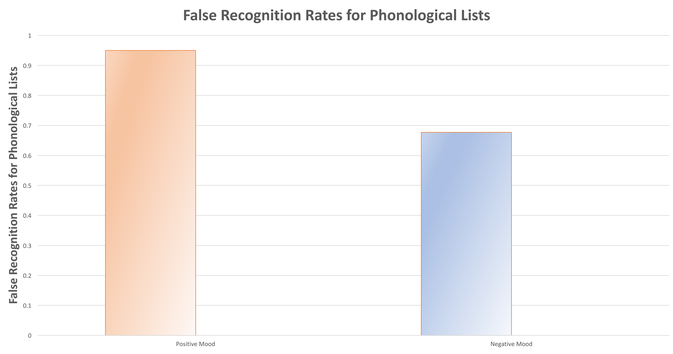
Method



Results

• Expected Recognition Rates: The graphs indicate the mean score for false recognition rates depending on mood condition. Figure 1 shows the false recognition rates for semantic related word lists. Figure 2 shows the false recognition rates for phonologically related word lists.





Results

•The expected results should be consistent with our hypothesis that individuals in the positive mood group will have higher rates of false recognition than those in the negative mood group
- The expected results should be consistent with our second hypothesis and previous studies that phonologically rated words will have higher false recognition rates when in positive moods compared to individuals who studied semantically related word lists in negative moods

Discussion

- Our expected results should be consistent with McBride et al. (2019) study that false memories are more frequent for phonological than semantic lists at shorter delays
- Our expected results should be consistent with the finding that false memories are more likely to occur at the short term level (Coane et al., 2007)
- Our expected results should be consistent with the Roediger and McDermott (1995) study that false recognition rates are produced when critical lures are introduced
- Our expected results should reflect that of Roediger, Balota, & Watson (2001) which states that the activation monitoring theory plays a part in the encoding and retrieval of similar items with semantic familiarity
- The DRM paradigm was used to observe word lists and its relationship to false memories

Department of Psychology
Illinois State University