

Case study: mood- congruent memory



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Mood-congruent memory refers to the tendency for individuals to attend to and learn more about those events which match their emotional state. This study aimed to extend inconsistent previous findings, regarding the mood congruence effect on non depressed individuals; in their natural mood settings using a mixed design. In this study 73 university students were asked to rate their current mood before going on to take part in an auditory memory task of 20 words; participants were asked to recall as many words as possible in order to test the hypothesis that; participants would recall significantly more of those words which matched their self reported mood. However contrary to the majority of previous research in this area; there was no evidence of an interaction between mood and affective content on words recalled. Therefore the null hypothesis was not rejected and the implications discussed.

INTRODUCTION

In everyday situations we are constantly presented with an abundance of observations and information. In order to interact in these situations it is essential that information can be stored, maintained and later recalled. It is not surprising that an individual's mood, at any given time is influential on which aspects of the current environment appear most salient and thus what is recalled about past and present experiences.

Recently, experimental psychologists have aimed to uncover the role of mood on the mechanisms used to store and retrieve memories. It has been suggested by Lewis and Critchley (2003) that similarities in mood at encoding and retrieval increases memory recollection, irrespective of the events' affective valence. However extensive research illustrates the

profound effect of emotional material on memory. Kensinger and Corkin (2003) proposed evidence that when participants are shown a series of emotional and neutral words they will later recall a greater proportion of negative words, thus questioning the idea that an event's affective valence has no effect on future recall. Subsequent developments have suggested that memory will improve if the emotional valence of information matches an individual's mood; a mood congruent memory effect (Bower, 1981).

This is a concept which had been tested extensively on depressed individuals. Recent empirical research by Howe and Malone (2011) showed that depressed participants recognized significantly more depression-relevant words than non-depressed controls when asked to recall a list of adjectives; an effect which has been replicated and observed frequently in various empirical tests.

In contrast, Hasher, Rose, Zacks, Sanft and Doren (1985) failed to observe a mood congruent effect on non-depressed students in their natural mood, when completing a visual memory task. Thus Blaney (1986) argues that a mood-congruent effect only appears to be robust, for clinically depressed individuals suggesting that other biases need to be considered. Mayo (1989) introduced the personality congruent effect which suggests that, when mood is controlled for, it is an individual's personality which interacts with the affective content of information recalled. Nonetheless analysis of three independent visual memory studies by Mayer, McCormick and Strong (1995) proposes that there is still a robust mood congruent effect in everyday situations among the non-depressed population.

There is clearly conflicting beliefs regarding the legitimacy of a mood congruent effect, for non depressed individuals in their natural mood settings. In consideration of these inconsistencies, as well as the importance of memory in imperative settings it was felt that this study should aim to advance and clarify the role of an individual's natural mood on the affective content of words recalled, using an auditory memory task. If mood and the affective content of material interact in their effects on recall, then it is predicted that those individuals who rated themselves as in a positive mood will recall more positive words meanwhile those rated as in a negative mood will recall more negative words.

METHOD

DESIGN

In this study a mixed design was used to investigate the possible interaction between two independent variables; current mood (negative mood vs positive mood) as a between subject factor and word type (negative vs positive words) as a within-subjects factor. Participant's mood consisted of two levels, rated on a likert scale. Participants scoring 1-3 were assigned to the " negative mood" group and participants scoring 4-6 being assigned to the " positive mood" group. The dependent, variable was the amount of words recalled; either positive or negative valenced as classified in the researchers word list.

PARTICIPANTS

An opportunity sample of 73, English speaking UEA, second year undergraduate Psychology students, took part in this experiment of which 10 were male (M = 23. 0, SD = 7. 3) and 60 female (M = 21. 4, SD = 4. 49). The <https://assignbuster.com/case-study-mood-congruent-memory/>

age of participants ranged from 19 to 40 years of age ($M = 21.1$, $SD = 4.5$). Participants were assigned to groups according to their mood ratings; 50 of which were assigned to the positive mood ($M = 21.1$, $SD = 4.7$), and 23 participants to the negative mood condition ($M = 21.1$, $SD = 4.1$)

APPARATUS/MATERIAL

The main materials used to test this hypothesis was; the word list, (Appendix C) which consisted of 20 words, 10 of which were of negative valence and 10 of positive valence, this was created independently by the researcher ensuring that it was original and containing common English words. A likert scale (Appendix B) was used in order to operationalize mood; with a scale ranging from 1 (feeling depressed) to 6 (feeling happy) this also included space to record how many positive and negative words participants had recalled.

PROCEDURE

Participants were approached in a psychology lecture to take part in this study, they were informed that participation was not compulsory and were reminded that if they were to participate all data would remain anonymous and strictly confidential; using ID numbers. After participants agreed and gave their consent (Appendix A) to take part in the study, they were informed of the following standardized instructions (Appendix A). The experimenter explained that their task was to recall as many words as possible from the announced word list (Appendix C) Prior to beginning the task, participants were asked to rate their current mood from one to six on a likert scale (Appendix B) and were free at this stage to ask any questions or have any instructions repeated. Participants were then given four minutes to

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recall as many words as possible on a blank sheet of paper. The word list was then presented on a projector screen with the relevant valence assigned to each word, and participants were asked to record the amount of negative and positive words recalled, along with their age and gender.

After completing the task, a written debriefing was given to everyone who participated (Appendix D), Participants were informed that once they entered their data they would be unable to withdraw, as data would be anonymous from this point, further information could be gained by emailing the researcher directly.

RESULTS

On average those students who reported being in a negative mood recalled slightly more words than those in a positive mood. Furthermore negative words were recalled more frequently than positive words. Descriptive statistics of the variables are provided in table one.

Mood

Word Valence

Negative Mood

Positive Mood

Total

M (SD)

M (SD)

M (SD)

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Negative Words

6. 1 (1. 8)

5. 2 (1. 9)

5. 7 (1. 7)

Positive Words

5. 5 (1. 7)

5. 0 (1. 3)

5. 0 (1. 4)

Total

5. 6 (0. 7)

5. 2 (1. 0)

68. 1 (9. 2)

Table one – Descriptive statistics for word recall in each mood condition

Investigation of skew and kurtosis scores illustrated that the positive mood, negative word valence group were not within acceptable limits, of +2 to -2.

(Table one) Histograms illustrated that there was just one outlier in this group ($M = 5.2$ and the trimmed mean = 5.9), thus it was decided that this outlier would be changed from 11, to the next highest data point, of 8.

Following this alteration; the negative mood, positive valence group were

within the +2 to -2 boundaries; (skew $z = -0.16$, kurtosis $z = -0.18$).

Subsequently all conditions were within the desired limits, to assume a normal distribution and thus run a parametric test on the data.

Mood

Word Valence

Z(skew)

Z(kurtosis)

Negative

Positive

2.16

3.07

Positive

Positive

-1.09

-0.36

Negative

Negative

1.28

-1.11

Positive

Negative

1. 21

-0. 65

Table two: Skew and Kurtosis scores for each condition on original data

The Levene's test demonstrated no significant effect for positive word recall $F(1, 71) = 0.64$, $p = 0.43$, or negative word recall $F(1, 71) = 0.40$, $p = 0.53$ thus equal variance between the groups was assumed. Mauchly's test was significant indicating that the assumption of sphericity had been violated; therefore the Greenhouse-Geisser statistics are reported.

A multi-factorial 2×2 mixed ANOVA illustrated a significant main effect of word type on recall, $F(1, 71) = 5.96$, $p = 0.02$, $\eta^2 = 0.08$ with negative words ($M = 5.67$, $SD = 1.74$) being recalled more often than positive words ($M = 5.0$, $SD = 1.35$). The main effect for mood type on recall was non significant, $F(1, 71) = 2.99$, $p = 0.09$, $\eta^2 = 0.04$ and there was no significant interaction between self reported mood and the word valence recalled $F(1, 71) = 0.74$, $p = 0.393$, $\eta^2 = 0.01$, thus the null hypothesis could not be rejected.

DISCUSSION

The primary goal of this study was to explore whether a mood congruent memory effect could be established for students in their natural mood. In this case there appeared to be no main effect of mood on memory and

essentially, no interaction between word valence and current mood on word recall; therefore the null hypothesis was not rejected.

Concerning previous research, this study questions the majority of research regarding the role of mood congruence on future recall. Instead it lends additional support to Hasher, Rose, Zacks, Sanft and Doren's (1985) finding that, mood congruence does not seem to have such a profound effect on recall for non depressed individuals, in their natural moods. Furthermore this study failed to provide evidence of a main effect of mood on memory regardless of word valence. Thus further exploration of a possible; personality congruent effect on recall (Mayo, 1989), may provide an explanation, for these inconsistencies in previous research. Especially between non depressed and depressed individuals who are likely to have personality characteristics, which are generally more negative in nature, which may explain why a mood congruent bias seems to be so robust for depressed individuals, in particular (Howe and Malone, 2011).

Although the present study illustrates no evidence for an interaction, between word valence and mood on word recall, some evidence is provided that, regardless of mood, significantly more negative words are recalled compared to positive. Thus in line with previous research by Kensinger and Corkin (2003) the importance of emotional information on subsequent future recall is supported. Suggesting the possibility that, a more rigid and detailed processing occurs when memorising information that is negative in nature.

Nonetheless the interpretations of these findings are qualified, to some extent, by the studies potential limitations. In order to distinguish the true

effect of mood congruence on word recall, a much more reliable word list needs to be implemented, with specific regard to the role that primacy and recency effects have on memory recollection. In this study both the first and last word were of negative valence which may explain the increased recall of negative words compared to positive. This must be considered as a limiting factor, which needs to be addressed in future research; before such findings can be applied to those imperative settings, in which these biases can play an essential role, such as education and crucial eye witness accounts.

In conclusion this study provides no further evidence for a mood congruent memory bias for students in their natural moods, and instead questions whether mood has such a profound effect on subsequent recall. Thus in order to enhance and clarify the effect of memory biases in vitally important environments, further research which aims to investigate these discrepancies; with particular regard to, the possibility that a personality congruent memory effect could verify and validate these findings, is required.