

Emotional words and there affect on memory



Performance in memory tasks seem to vary depending on the emotional significance of the memory list. In view of this, the present study investigated whether memory would improve for emotional words compared to neutral words. A matched pairs design was used with an opportunity sample of 100 participants ($M = 19.7$, $SD =$), each participant was read a word list which consisted of emotional and neutral words. Participants were told their goal was to remember as many words as possible. They were then told to recall as many words as they could. The results showed that there was a significant difference $t(99) = 6.235$ and $p < 0.001$ between memory of emotional words, suggesting emotional words are better remembered than neutral words therefore the null hypothesis can be rejected.

Introduction

In order to interact with our environment it is essential that we can store, maintain, and recall information. As memory is such a vital component of human life, which is commonly used in imperative and emotional situations such as eye witness testimony it is an essential research area for psychologists. In everyday situations we are constantly presented with an abundance of observations and information. However those events which are related to strong emotions seem to be better remembered than those which lack emotional significance.

An extreme example of emotional recollections is illustrated through flashbulb memories (Brown & Kulik, 1977); these are strong memories which occur in situations where individuals retain a very vivid, almost photographic memory of an emotional event such as that of the twin towers incident.

Although it may be argued that these extreme emotional events are rare

research by Talarico, Labat & Rubin (2003) seems to suggest that emotion also has a key role to play in autobiographical memories declaring emotionally relevant events in an individual's life, are remembered much better than neutral scenarios

Elaborative research carried out by Rubin & Kozin (1984) suggested that these vivid memories attribute strong feelings of surprise and stress; suggesting that this attribute seems to induce enhanced emotions, and subsequent memory of this stimuli. With this in mind it has been suggested that there is an enhanced recall of negative memories compared to positive memories, since negative memories are likely to provoke much stronger feelings of surprise, shock and fear. Indeed there is a vast amount of laboratory research which suggests that this is the case.. Research detailed by Ochsner (2000) proposes a clear recollection benefit of emotionally arousing negative events compared to emotionally arousing positive and neutral stimuli.

Further research signifies that negative events are remembered more accurately Research provided by Kensinger and Scharter (2006) who asked fans to recall the final game of the play off series, in which the Yankees were defeated by Red Sox. They found that Red Sox fans, who would have found the outcome positive, showed much stronger memory inconsistencies, and more overconfidence, than that of Yankees fans.

Some contradicting and challenging research has been conducted by Johnson, Foley, Uengus and Foley (1988) who asked subjects to recall two positive, negative and neutral autobiographical events. The findings showed

that positive memories were more opulently recollected than negative ones and furthermore they also contained more sensorial and contextual information than those of negative memories. This research indicates that the most vivid and intense autobiographical memories tend to be those events with high positive emotional richness.

A recent laboratory study by Kensinger and Corkin (2003) confirmed that if participants are shown a series of emotional and neutral stimuli (word list), they will later recall or recognize a greater proportion of the negative emotional stimuli than of the neutral stimuli. Leaving open the question of whether the same would be true of positive stimuli.

There are clearly conflicting beliefs on the accuracy of positive and negative emotional stimuli on memory and with such a high amount of previous research concentrating on the effect of negative emotional information on memory this investigation creates an interesting follow up, with the goal being, to assess further the effect that positive emotionally valenced words can have on memory. It was felt that these developments were required in order to advance and clarify the effect of emotion on memory in cognitive research

H1 Students will recall more positive emotional words than neutral words from a word list.

Design

In this study an experimental design was used to test whether the amount of words participants remembered differed between emotionally positive and neutral words when asked to memorise a word list. A within groups design

<https://assignbuster.com/emotional-words-and-their-affect-on-memory/>

was constructed in which each participant was asked to remember a word list and the recall of emotional and neutral words was recorded. The independent variable of this experiment was the presence of emotional and neutral words on the word list. The dependent variable was how many emotional words were remembered compared to neutral words. Performance in the test was measured as the amount of emotional and neutral words remembered. A cross over design was used in order to ensure that primacy and recency effects were controlled for.

Participants

An opportunity sample of 100, English speaking UEA students, took part in the experiment of which 50 were female ($M = 19.6$ $SD = 2.40$) and 50 were male ($M = 19.7$ $SD = 2.51$). The age of participants ranged from 18 to 56 ($M = 19.7$, $SD = 2.4$) All participants were studying a variety of subjects at the University of East Anglia.

Apparatus/Material

The main material used to test this hypothesis was the word lists (Appendix A) which each consisted of 15 words independently constructed by the researcher. Words were selected from Affective Norms for English by Bradley and Lang 1999. Words with a valence above 7 were classified as positive and those around 5 as neutral, with a general level around 5. In order to control for arousal, the words were chosen to have an arousal rating of at least 4.5. This ensured that all words used had been measured and signified as emotional or neutral. The words used were common, English words such as: flirt, storm etc, which should have been easily recognizable to all English speaking participants. A stopwatch was used to make sure that

<https://assignbuster.com/emotional-words-and-their-affect-on-memory/>

each participant did not take longer than 5 minutes to recall the words. Researchers also used the stopwatch to ensure a gap of 2 seconds was used between announcing each word in the word list, to prevent deep levels of processing from occurring. Participants also received an instruction sheet (Appendix B) and this was followed by a debrief (Appendix C). All results were recorded onto the cover sheet (Appendix A) for easy collation of data from all participants.

Procedure

After participants agreed to take part in the study, they were informed that all results and information would be anonymous and would remain completely confidential. Participants were then seated alone in a quiet room and informed of the following standardised instructions by the experimenter. The experimenter explained that their task was to memorise as many of the words that the experimenter announces as possible. At this stage participants were free to ask any questions or have any instruction repeated. The participants were read aloud a word list by the experimenter containing 15 words, which were counterbalanced. The experimenter allowed a period of 2 seconds between announcing each word. Once the list of words has been read out the participant was told to start counting backwards from 20 to 0 out loud. When they reached 0, participants could start writing down as many of the words as they could remember within a 5 minute time frame. After completing the memory test, a verbal debriefing was given on the aim of the experiment and participants were thanked for participating in the research and told that they could withdraw their data at any point.

Participants were informed they could receive further debriefing of their results if they wished.

Result

When analyzing the means of the emotional and neutral word conditions it is clear to see that participants recalled significantly more emotionally positive words ($M = 6.3$, $SD = 1.95$) than in the neutral word condition ($M = 4.59$, $SD = 1.652$) and this is the case for both males and females see table one below.

Table One: Means of each gender words remembered positive and neutral

Skew and kurtosis were within acceptable limits for the positive words (skew = 2.09, $se = 0.69$; kurtosis = 4.93, $se = 1.33$). Skew and kurtosis were also within acceptable limits for the negative words (skew = 0.74, $se = 0.69$; kurtosis = -0.76, $se = 1.33$). As there appeared to be a normal distribution in the scores a parametric test was carried out. The results of the independent sample T test suggested that there was a significant difference between the two conditions, $t(99) = 6.235$, $p < 0.001$ (one tailed) (see figure 1), therefore the null hypothesis can be rejected.

Discussion

In the present investigation, the aim of the study was to examine whether there was a similar benefit for recall of emotionally positive, as compared with neutral, words. The results of this experiment confirmed that there does seem to be such a benefit: Throughout the task, words were much more likely to be remembered if they were emotionally positive than neutral words., leading to a rejection of the null hypothesis.

Concerning previous research the study lends additional support for some of the preceding literature carried out on this topic area such as that of Johnson, Foley, Uegner and Foley. However results question research carried out by Kesinger and Scharter and Oschner which proposed a poorer and much more inaccurate recall for positive information.

The population used was limited to just UEA undergraduate students, and since undergraduate students would have had many years of practice in the techniques of recalling and recognizing information their results are likely to differ compared to those of the general population. This limits the significance of these findings to the UEA population alone and additional research needs to be conducted on the general population in order to be able to apply these findings on a larger scale.

In order to ensure that this significant result is due to the manipulation of the IV alone it is important that future studies control for the current mood of participants during the testing period. It has long been known that mood and memory are interrelated and it could be argued that those participants in a positive mood when memorizing information were subsequently more likely to remember the positive words presented.

More robust results could have been obtained if the experimenter played a less active role in future studies it is important that prospective studies control for any possible experimenter bias is controlled for example by using an acoustic recording of the word list to be presented to each participant to provide a consistent version in order to prevent experimenters pronouncing emotional words more vividly and enthusiastically to some participants.

As memory plays a crucial role in a variety of everyday settings such as the workplace and education these results can be applied and used to improve the ways in which students and colleagues revise and utilize their memory abilities. As the study suggested that positive information is recalled better than neutral information this can be realistically applied to the workplace and education by playing positive music and improving the positive information which is used in these settings it could have major influences on recall abilities.

To understand better the range of events for which this pattern can be observed, future studies will be needed. Future studies controlling for the mood of participants allowing us to integrate the effect of mood dependent memory into that of the current topic area. It would be effective for future research to concentrate on the possible differences between negative and positive information recall directly by integrating both positive and negative emotional words into the word lists. Although this area is looking at improvements in memory other studies into the effect of emotion induced forgetting would also help advance this area of psychology.