
Past research has indicated that alcohol placebos can influence a variety of social behaviors. For example, when participants were told they had consumed alcohol, but in reality they had not, they displayed increased aggressiveness and greater interest in sexual material. In fact, behaviors that are normally inhibited are those that display the greatest effects of alcohol placebos. Studies investigating the effects of alcohol placebos on memory, however, have failed to reveal a similar effect, leading several researchers to conclude that memory is not affected by social factors.

However, an experimental paradigm used in memory research that does incorporate social factors might allow detection of the influence of alcohol placebos on memory. In particular, misinformation studies, in which participants are presented misleading information after witnessing an event, have been found to be susceptible to a variety of social factors, such as the social status of the person delivering the misinformation.

The question addressed in the present study, therefore, was whether alcohol placebo effects on memory could be detected by using a paradigm that combines social and non-social factors. Specifically, would participants be more susceptible to misinformation if they were told they had consumed an alcoholic beverage? Two hypotheses were outlined: First, for items upon which they had been misled, participants who were falsely told they had consumed alcohol would be more inaccurate than participants who knew they were drinking a non-alcoholic beverage; second, on items for
which no misleading information had been presented, accuracy rates between groups would be equivalent.

The participants in the study were 148 undergraduates, randomly assigned to one of two groups: the told-alcohol and the told-tonic. Both groups were given plain tonic to drink, but one group was told their glasses contained vodka and tonic. As participants consumed their drinks, they watched a movie. After the movie, they saw a slide show depicting a man shoplifting in a store. The slide show included eight critical items, such as a candle and a notebook. Participants then completed a filler task, before being given a narrative to read. The narrative contained misleading information about half of the critical items and neutral information about the other four. Finally, participants were given a test in which they were asked to indicate details about the items from the slide show (and not from the narrative) as well as indicate their confidence in the accuracy of their responses.

The independent variables in this study were whether participants were told they were drinking plain tonic or vodka and tonic and the type of information were given (misleading or neutral). The first independent variable consisted of the operational definition of alcohol placebos: The assumption underlying the manipulation was that if participants were told they drank alcohol they would be more likely to manifest certain behaviors. The second independent variable, the type of information, consisted of the operational definition of misinformation: Participants exposed to misleading information would be more likely to distort their memory for an event. Two dependent variables were measured: memory accuracy and confidence. The former was measured by counting the number of items correctly recognized on the memory test; the latter was measured on a 5
point Likert scale on which participants indicated how confident they were their responses were accurate.

The results indicated that, on average, participants who thought they had consumed alcohol were less accurate and more confident in their responses after reading misleading information in the narrative. However, in regards to items for which no misleading information had been presented, told-alcohol and told-tonic participants were equally accurate, indicating that the alcohol placebo did not affect memory per se, but simply increased participants susceptibility to misleading information. Finally, both groups were more confident in the accuracy of their responses after being misled. These results did support the initial hypothesis: Memory accuracy was more affected by misleading information when participants thought they had consumed alcohol.

This study made three important contributions to the literature. First of all, it was the first empirical study to find evidence of alcohol placebo effects on memory. This was accomplished by using a memory research paradigm known to be susceptible to social factors. Second, this study also provided evidence that memory is not purely a cognitive function; rather, memory is also affected by social factors and serves a social function. Third, the study indicated that the misinformation effect is also influenced by social and cognitive factors.