

The Effects of Emotional Content and Time Lapse Reporting on Eyewitness Testimony

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Abstract

This experiment aimed to examine the influence of emotional versus non emotional events on the recall and accuracy of eyewitness memory, and how the time between viewing the scene and reporting back about it affects the recall and accuracy. Four condition groups were established all viewing the same video but being told they were seeing either “actual footage” of a crime scene or a “reenactment”, and two taking the survey immediately after the video and the remaining two taking it four days later. The survey consisted of two open-ended questions asking for details about all aspects of the crime scene. Our experiment results established that the emotional level of the video affected recall but the time lapse did not have a statistically significant difference. We found that emotionality of a crime scene was positively correlated with recall accuracy.

Introduction

This study analyzes the influence of emotional stimuli on eyewitness testimony. Four separate condition groups were created to not only view if emotional content led to more accurate testimony but also to see if recall retention rates increased over time. The study, “The emotional eyewitness: The effects of emotion on specific aspects of eyewitness recall and recognition performance ” discusses the influence of negative emotion and how that effected recall and recognition performance by eyewitnesses (Houston, K. A., Clifford, B. R., Phillips, L. H., & Memon, A., 119). Our survey mimicked the methodology of this particular experiment by creating different condition groups consisting of emotional stimuli as well as non-emotional footage. Results for Houston experiment appear to be ambiguous with higher completeness of recall overall but no noticeable increase in accuracy (Houston, K. A, 125). The “Retention interval and eyewitness memory for events and personal identifying attributes” also examines differing retention rates to see if there is any noticeable drop in recall between initial questioning and secondary question at a later time (Ebbesen, E. B., & Rienick, C. B., 746). Our experiment utilizes a delayed recall as well to draw a correlation between emotional stimuli and extended recall. We hypothesize that participants who view an emotionally charged event will deliver more accurate recalls over a longer span of time in comparison to non-emotionally stimulated witnesses. We also propose that those who report back about the event immediately after viewing the scene will have higher recall scores than those who have a four day delay to report.

Method

Participants

The volunteer participants for this study consist of both male and female college students from Southern New Hampshire University. We gathered data between four different participant groups and each represented a different condition. The four classes we used as participant groups were The Victim and the Justice System, Cognitive Psychology, and two separate sections of Research Methods. The Victimization class, consisting of 14 students, were in the condition that viewed the “actual footage” and took the delayed report survey four days later. Cognitive Psychology was a pool of 11 students who viewed the “actual footage” and took the survey immediately after viewing. One research methods class saw the video as a “reenactment” and the 17 students took the survey four days later. And the other research methods section with 20 students viewed the video as a “reenactment” and took the survey immediately after.

Materials

- Four different participant groups
- Video footage from a surveillance camera of an armed robbery in a convenience store
- Open ended question surveys

Procedures

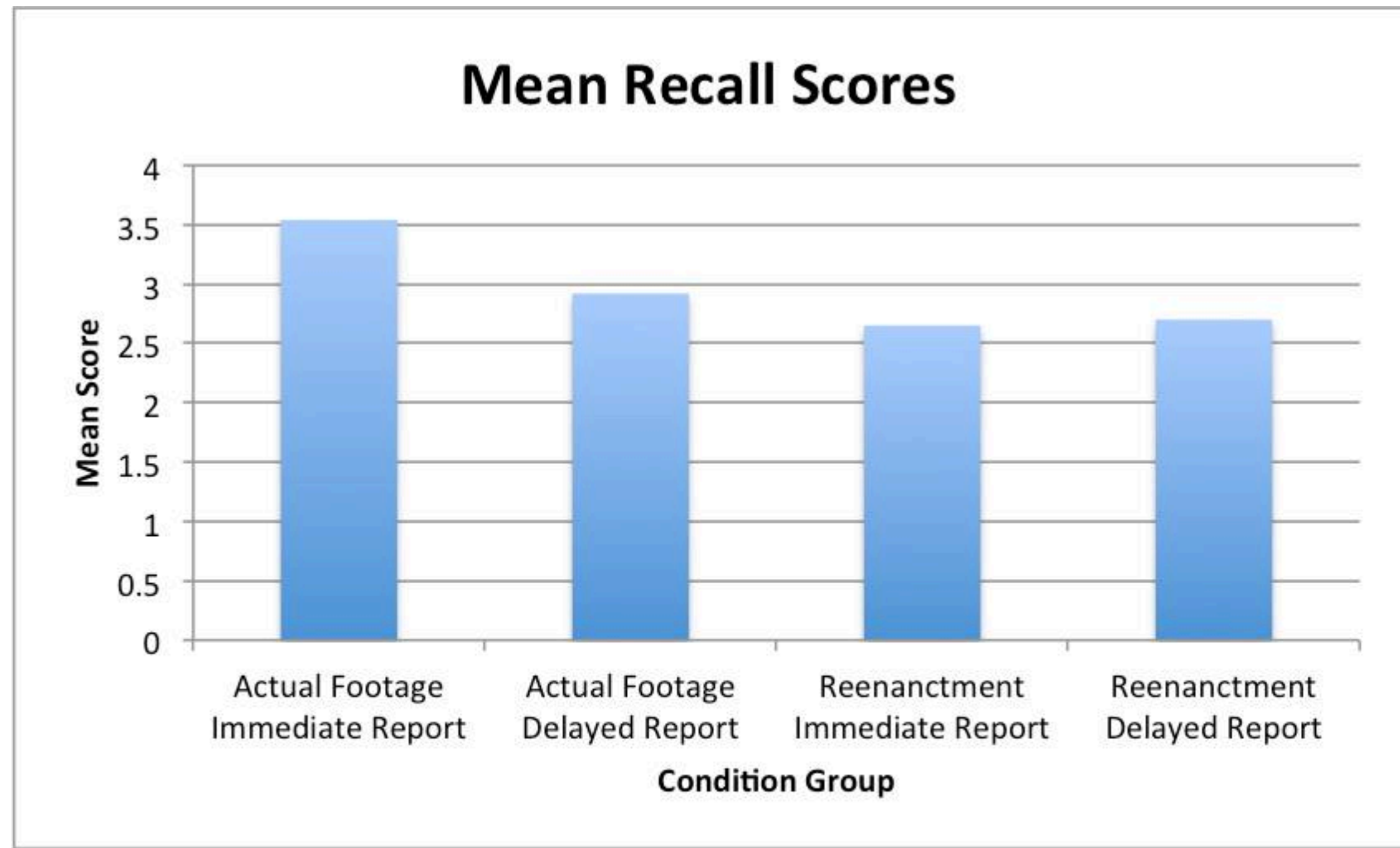
For this experiment there were four condition groups, actual footage delayed report, actual footage immediate report, reenactment delayed report, and reenactment immediate report. Each group was told that the footage they were about to view was either actual footage from a crime scene or a reenactment done by actors of a fictitious crime scene, although the video was the same for all four groups. The two-minute video was then played for the students with no sound. After viewing the video, the students in the immediate report conditions were handed out a survey to take with two open-ended questions. They were asked to report back in as much detail as possible about the general event of the crime (including details about the victims, important events, and scene), and about the perpetrators (clothing, weapons, race, gender, etc.) in the video. Those who were in the delayed report conditions did nothing after watching the video. They went back to their regularly scheduled class. Four days later, in the same class period we came back, and that is when they took the same survey that their immediate report counter parts took. After all the surveys were distributed and filled out we graded them based on a ranking scale. They surveys were given a score of 1 – 5 for the amount of details they remembered accurately. The grade was decided from a premade list of key factors they should have noticed and picked up on. This data was then analyzed to gain the results of the study.

Results

The tables and graphs pictured above are the statistical results of the study.

If you refer to the bar graph you will see the results in mean recall scores of the study. The actual footage (af) participant groups both scored higher means than the reenactment groups regardless of reporting time (af immediate: 3.55, af delayed: 2.93). The mean recall score for the reenactment condition (r) yielded overall lower numbers (r immediate: 2.5, r delayed: 2.76). ANOVA tests were also ran on the results. The two ANOVA combinations were to find if there was statistical significance for the recall interval scores, and for the emotional content scores. Eyewitness Recall vs. emotional content proved to be statistically significant ($p=.038$), while eyewitness recall vs. recall interval did not yield statistically significant information ($p=.417$). These numbers showed a connection between increased emotional content bringing higher recall but not enough significance for recall interval effecting eyewitness recall.

Table and Graph



One-way ANOVA: Eye Witness Recall versus Emotional Content

Source	DF	SS	MS	F	P
Emotional Content	1	4.99	4.99	4.49	0.038
Error	60	66.70	1.11		
Total	61	71.69			

One-way ANOVA: Eye Witness Recall versus Recall Interval

Source	DF	SS	MS	F	P
Recall Interval	1	0.79	0.79	0.67	0.417
Error	60	70.90	1.18		
Total	61	71.69			

Discussion

Our study shows a higher recall rate for those who experienced the more emotional of the stimuli (the actual footage). Those who viewed the “actual footage” condition yielded a more accurate recall than those who saw the “reenactment”. The means are higher for both actual footage conditions than the means for the two reenactment conditions regardless of the time reported aspect. The other condition tested was how time span between viewing the event and reporting back about it would effect what could be recalled. This condition proved to be non significant and the results showed not enough statistical significance to make the difference in time reported matter. Our findings establish that level of emotional content in a crime scene will yield stronger and more accurate accounts of the scene than non emotional events, but that the timing of when the report is taken does not actually effect the ability to recall the information. This is similar in nature to other studies done in reference to emotional contents’ impact but our results are in contest to most other studies in terms of how time lapse effects memory in eye witness events.

References

Ebbesen, E. B., & Rienick, C. B. (1998). Retention interval and eyewitness memory for events and personal identifying attributes. *Journal Of Applied Psychology*, 83(5), 745-762. doi:10.1037/0021-9010.83.5.745

Houston, K. A., Clifford, B. R., Phillips, L. H., & Memon, A. (2013). The emotional eyewitness: The effects of emotion on specific aspects of eyewitness recall and recognition performance. *Emotion*, 13(1), 118-128. doi:10.1037/a0029220