Forensically Relevant False Memories in the DRM Paradigm

Allison Gendreau, Yamil Ruiz Garcia Michael Toglia, Nicole Juszczak & Donald Lawler
University of North Florida   Cornell University   Cayuga CC- Auburn, NY

Introduction

Forensic interviews and eyewitness testimony clearly rely on memory. In 85% of criminal prosecutions there is no medical nor trace evidence, thus the burden is on what witnesses' saw/heard. Memory is the evidence! However, cognitive frailties as in forgetting and retrieval failures, combined with misinformation threaten the accuracy and credibility of eyewitnesses' recollections. Together, these factors support the creation of false memories, often confidently held, that have serious consequences when forensic events are at issue. This investigation employed a simple lab task, learning word lists, to examine true and false memory. In addition to including control lists, we introduced forensically-oriented lists into the mix of information to-be-remembered. We expected forensic material to be correctly remembered at the same level as comparison lists. Thus, true memory should be essentially equal across list types. The key questions centered around the possibility of differences in false memory rates among lists. Forensic information may not protect against the production of false memories, however material that is legal nature may exhibit lower rates of inaccurate recollections than the comparison material. We sought to answer these research questions in two studies.

Method

Participants. In Exp. 1, recognition memory, 55 participants served for extra credit at a Northeastern college; 28 different students received extra credit for Exp. 2, a free recall study. *Material and Procedure.* List learning followed the Deese-Roediger-McDermott (DRM) Paradigm as participants study word lists each theme-related, converging upon a critical, non-presented, word. Consider Chair as the critical lure for the study list. *table, sit, legs, couch* etc. Participants remember many presented words and often "recollect" Chair. Exp. 1 involved 8 DRM lists, 96 words, read one after the other at a 2-s rate. There were 3 forensic lists (Guilty, Arrest, Thief). After study, the recognition test contained 68 words: 36 studied words (6 per list), the 6 critical lures (e.g., Guilty), 6 non-presented low associates (LA) of the DRM themes (judge), and 20 novel items from 6 DRM lists NOT read earlier that we call Pseudo lists, thus 6 Pseudo critical lures. A ten-minute recognition task required participants to respond Yes or No as to whether they had heard a word earlier. Exp. 2 participants studied 6 DRM lists, two of which were "forensic" lists. Each list was read at a 2-s rate and followed by a 2 min free recall period.
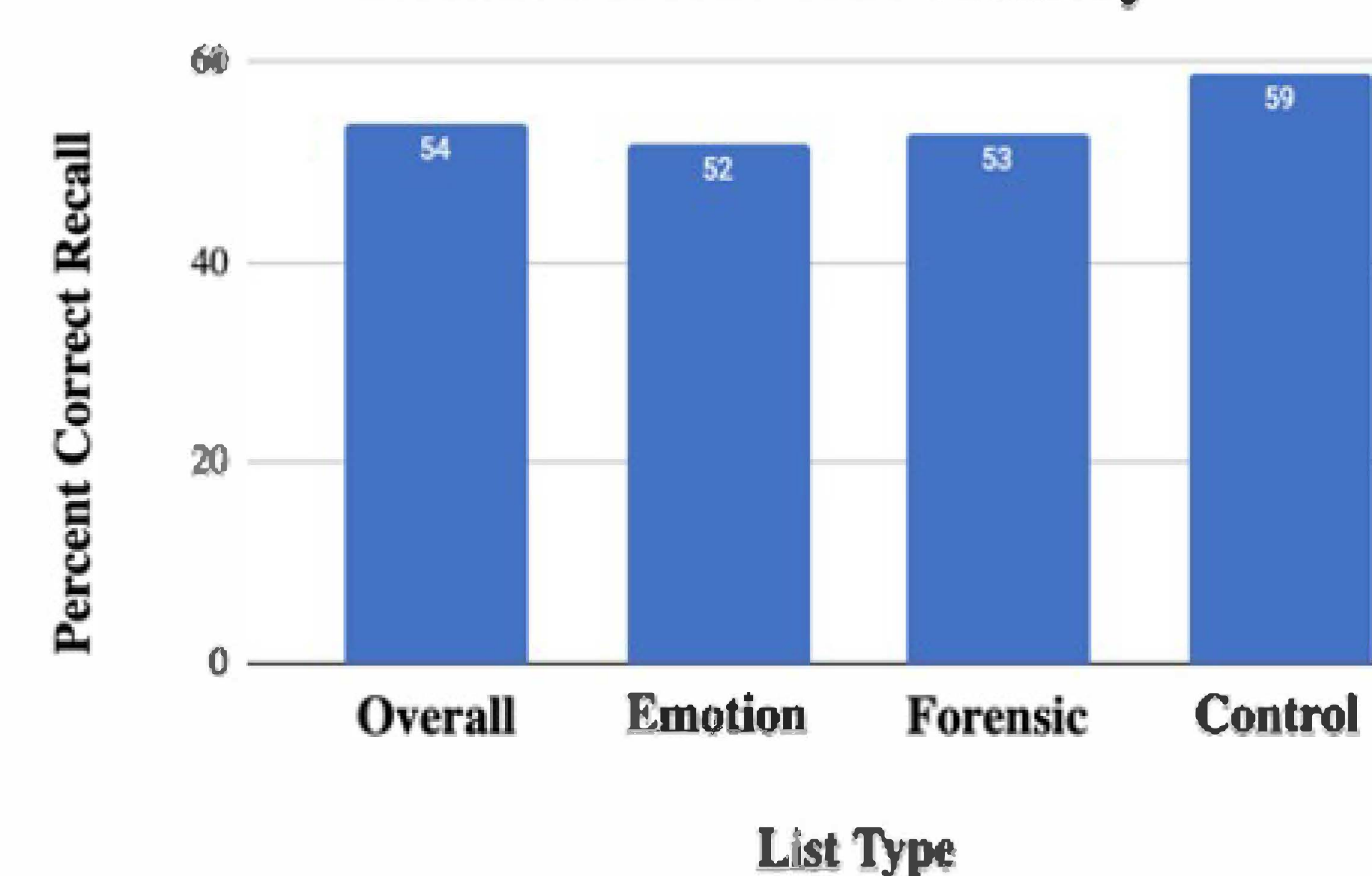
Results

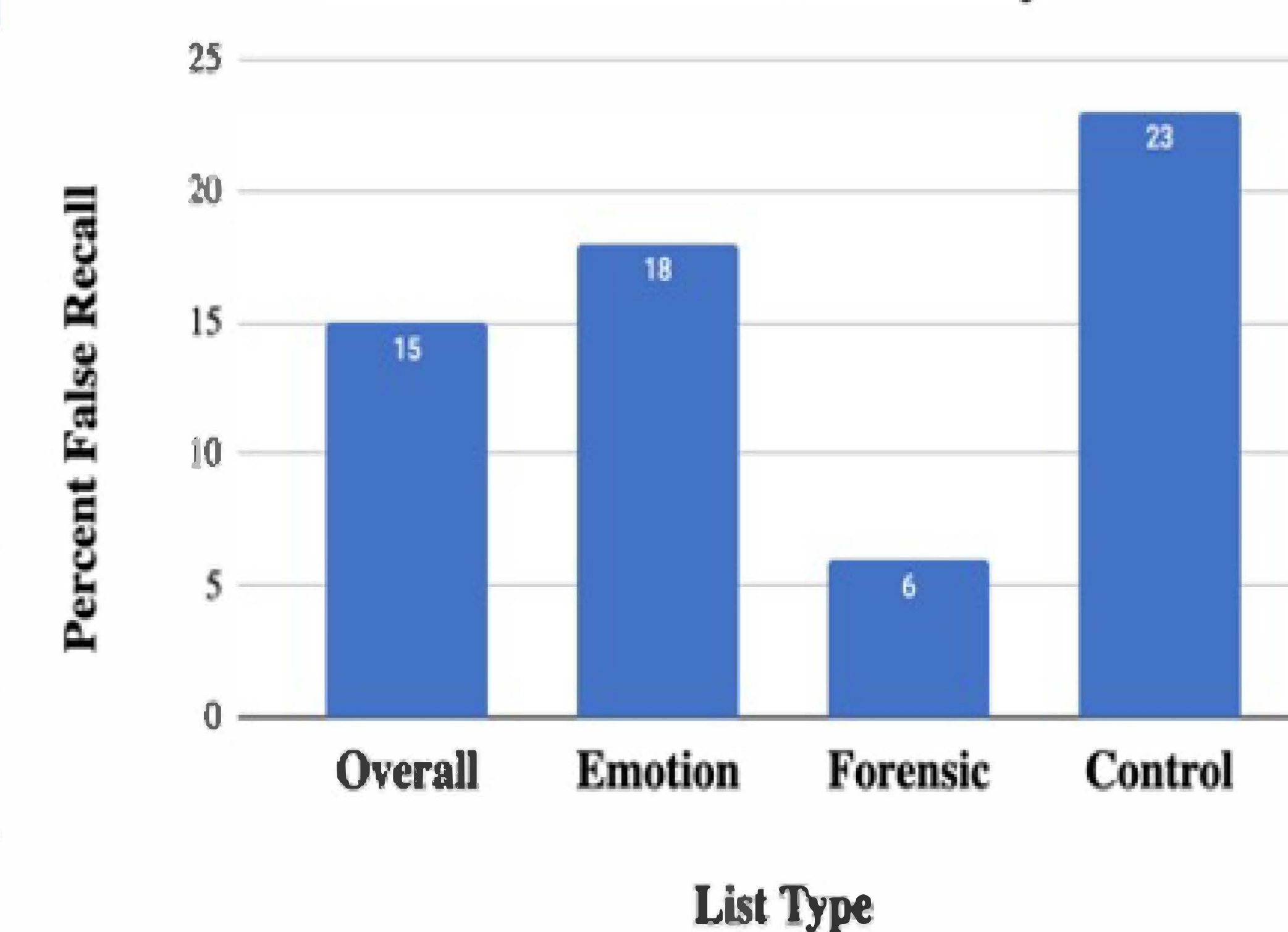Recognition: Percent True Memory by Target Type
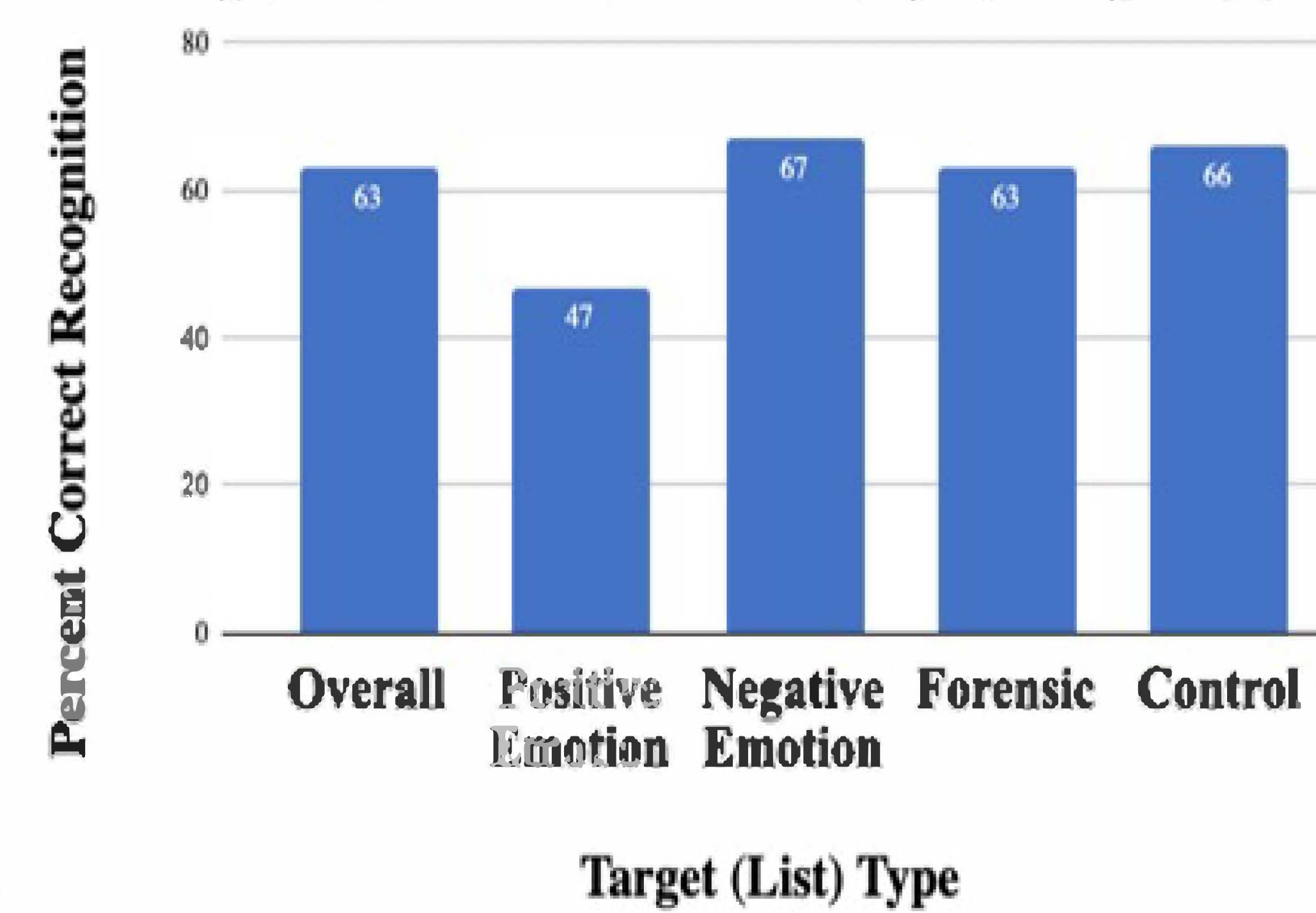
Recognition: Percent False Memory by Item Type
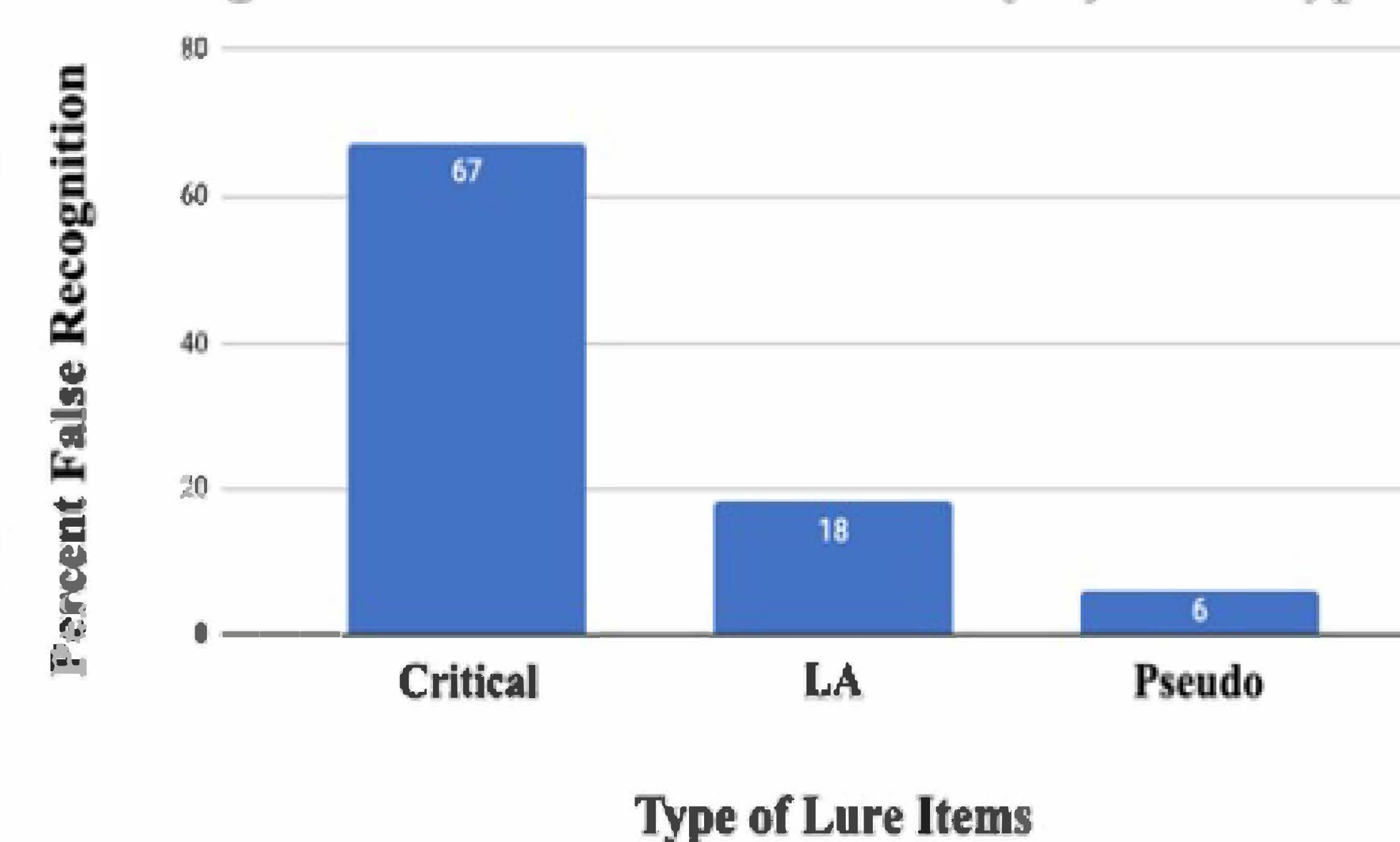
Recall: Percent True Memory

Recall: Percent False Memory

Conclusions

-True Forensic memory was similar for all list types as hypothesized
--False Forensic memory was somewhat lower in recognition and much lower in recall
--That Forensic illusory memory is attenuated, is "good" because false memories in criminal contexts such as forensic interviews, lineup identifications and confession-aimed interrogations, have major consequences.
--Regarding ecological validity, we suggest that the above-mentioned criminal contexts are relevant examples of where themes (e.g., Guilty) are introduced by investigators that might sway recollections in ways that engender false memory