Remote Associates Test (RAT) Priming study

- **Background:**
  Multhaup, Hasher, and Zacks (1998) have demonstrated that younger adults do better than older adults in an explicit memory test for irrelevant information whereas older adults do better than younger adults in an implicit memory test for the same information. In the study, both younger and older adults first read stories while ignoring distraction words. Then they were given a recognition task (explicit task) and a sentence completion task (implicit task) for the distraction words. The results indicated that the younger adults recognized the distraction words better while only the older adults showed priming for the distraction words.

  Moreover, May (1999) has shown that both the young and old can get benefits from their reduced inhibitory efficiency (in their non-optimal time of day) when distracting information leads to the solution of a problem. Especially, older adults can get more benefits because they have lower ability to inhibit distracting information. In the study, participants were presented with Remote Associates Test (RAT; Mednick, 1962) problems along with distracting words and were instructed to ignore the distracting words when solving the problems.

- **My Question:**
  The main purpose of the present study is to replicate one of the results of Multhaup et al. (1998) using May’s (1999) RAT problems. Older adults showed priming for distraction words in Multhaup et al. and got benefits in solving RAT problems when the distracting words lead to the solutions in May. Then what would happen when the distraction words by which they are primed are the solution words for the RAT problems? Thus, the hypothesis of the present study would be that older adults will perform better than younger adults for RAT problems whose solutions are presented as distracting information.

- **Design:**
  Younger and older adults receive both critical and control RAT items. Thus, the design would be a 2 (age: young, old) X 2 (RAT item type: control, critical) factorial design with age as a between-subjects variable and RAT item type as a within-subjects variable.

- **Procedure:**
  Each participant reads one practice story with no distractor and then four experimental stories with distractors. In each of the experimental stories, four RAT solution words are used as distractors and are repeated 15 times each. Then the participant receives three filler tasks (Stroop, Arrow, and Maze in this order) for exactly 15 minutes. Finally, the participant receives 50 RAT problems (18 fillers, 16 critical items, and 16 control items for 30 seconds each).