**You are provided with data for, a replication of Experiment 1 from this article in an SPSS data file named: WB.Replication.sav.**

**Question A1.1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Group |  | Mean | SD | 95% CI for mean | |
|  | (lower bound) | (upper bound) |
| Death Prime & Immediate Needs |  |  |  |  |  |
| Death Prime &Future Needs |  |  |  |  |  |
| Control Prime &Immediate Needs |  |  |  |  |  |
| Control Prime &Future Needs |  |  |  |  |  |

**Question A1.2**

Use Tukey Box & Whiskers plots to determine whether any of the groups contain outliers according to Tukey’s criterion, that is 1.5 times the box width from the box. Consider each group in turn, rather than the entire sample for this analysis.

Provide the participant ID for any outlier cases you identify, and note whether the value is more than 3 times the IQR beyond the nearest quartile value.

Answer

**Question A2**

Perform the ANOVA model described in the report, on the replication data that you have been given, and report it fully (interaction and main effects) in a way suitable for inclusion in an APA style results section, including measures of effect size and statistical significance.

Answer

**Question A3**

**A3.1** Generate a 95% confidence interval estimate for each effect above, along with a *t* statistic (with *df*), and p value for a significance test for the effect.**[15 marks]**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Effect | t | df | p | 95% CI for the difference described | |
| (lower bound) | (upper bound) |
| E1 |  |  |  |  |  |
| E2 |  |  |  |  |  |
| E3 |  |  |  |  |  |

**A3.2** Explain whether or not the replication data set provides statistically significant support **for each of these effects** being in the direction reported in the original study. Describe and justify any choices you made conce rning the assumption of homogeneity of variance, and the use of one-tailed or two-tailed *p* values when making these claims

Answer

Paper 1

Study 1.

Manipulation Checks  
Task Deception. Subjects’ responses to the task-deception checks indicated that the deception manipulation was successful. PlaceboChecks. All subjects in the placebo condition indicated that they believed they had consumed alcohol. In response to a question inquiring about how drunk they felt, persons in the alcohol condition reported an average pre-TAP rating of 4.7 (SD = 1.9) and an average post-TAP rating of 5.2 (SD = 2.3; scale from 0, not drunk at all, to 11, drunker than I have ever been). The average ratings of persons in the placebo condition were 1.9 (SD = 1.4) and 2.0 (SD = 1.4), respectively. The pre- TAP and post-TAP ratings differed significantly between the alcohol and placebo conditions, t(46) = 5.7, prep > .99, d = 1.3, and t(46) = 5.8, prep > .99, d = 1.3, respectively. In response to a question about whether the alcohol they drank caused any impairment, persons in the alcohol condition reported an aver- age rating of 5.8 (SD = 2.4), and those in the placebo condition reported an average rating of 2.2 (SD = 1.3; scale from 0, no impairment, to 10, strong impairment), t(46) = 6.3, prep > .99, d = 1.4).

Aggression Data

Data for shock intensity and duration (in milliseconds) were transformed into z scores and then summed. This was done to increase the reliability of the aggression measure and because previous research has demonstrated that shock intensity and duration are part of a more general construct of aggression (Carlson, Marcus-Newhall, & Miller, 1989). The scores were then analyzed using a 2 (beverage: alcohol, placebo) x 2 (dis- traction: yes, no) x 2 (provocation: low, high) mixed-model analysis of variance (ANOVA) with provocation as the repeated measure. This analysis revealed a significant Beverage x Distraction interaction, F(1,44) = 5.53, prep = .93. Aggression was significantly suppressed in the alcohol-plus- distraction group compared with the alcohol-plus-no-distraction group, t(22) = -3.07, prep = .97, d = 1.4. Furthermore, ag- gression in the placebo groups was intermediate to aggression in the two alcohol groups (the placebo groups, with and without distraction, did not differ from one another). There was also a main effect of distraction, F(1, 44) = 10.76, prep = .98, indicating that aggression was lower in the distraction condition compared with the no-distraction condition, t(46) = -3.09, prep = .98, d = 0.82. The main effect of provocation was also significant, F(1, 44) = 9.82, prep = .98, indicating that subjects were more aggressive in the high-, compared with the low-, provocation condition.

RTs

A 2 (beverage: alcohol, placebo) x 2 (distraction: yes, no) ANOVA was conducted on the RTs during the TAP. Results indicated significant main effects for both factors. Subjects in the distraction condition had significantly slower RTs than those in the no-distract condition (distraction: M = 512 ms, SD = 83 ms; no distraction: M = 267 ms, SD = 52 ms), F(1, 44) = 172.0, prep = .99, d = 1.74. Alcohol also slowed RT (alcohol: M = 416 ms,SD = 144ms; placebo:M = 363ms,SD = 136ms),F(1,44) = 8.21, prep = .97, d = 0.38.

Study 2.

Aggression Data

A 2 (beverage: alcohol, placebo) x 5 (distraction: D0, D2, D4, D6, D8) x 2 (provocation: low, high) mixed-model ANOVA with provocation as the repeated measure revealed a significant Beverage x Distraction interaction, F(4, 110) = 2.99, p = .02. As shown in Figure 2, the means for the alcohol condition illustrate a V-shaped pattern. Specifically, in this condition, groups D0 and D8 exhibited the highest levels of aggression, groups D2 and D6 demonstrated intermediate levels, and group D4 showed the least amount of aggression (even lower than that of all the placebo groups). Tukey HSD post hoc tests revealed significant differences between the following groups in the al- cohol condition: D0 and D4 (prep = .98, d = 1.37), D2 and D4 (prep = .88, d = 1.05), and D4 and D8 (prep = .93, d = 1.20). There were no differences among the five placebo groups. Analyses also revealed a significant effect of beverage, F(1, 110) = 11.43, prep = .99; levels of aggression were higher after con- sumption of alcohol than after consumption of the placebo. The main effect for provocation was also significant, F(1, 110) = 16.82, prep > .99, indicating that subjects were more aggressive in the high-, compared with the low-, provocation condition.

RTs

A 2 (beverage: alcohol, placebo) x 5 (distraction: D0, D2, D4, D6, D8) ANOVA was conducted on the RTs during the TAP. Results indicated a significant main effect of distraction, F(4, 110) = 32.42, prep > .99. The D0 group had significantly faster RTs than all the other groups (D0: M = 269 ms, SD = 39 ms; D2: = 5493 ms, SD = 78ms; D4: = 5486 ms ,SD = 114 ms; D6: M = 549 ms, SD = 110 ms; D8:M = 525 ms, SD = 119 ms; ds ranged between 1.6 and 2.0; all preps > .99 using Tukey HSD post hoc tests). Groups D2 through D8 did not differ significantly from one another.

Paper 2.

Study 1.

The 2 (prime) × 2 (recipient) between-participants analysis of variance with donation amount as the dependent variable revealed no main effects and a significant interaction between death priming and recipient, F(1, 50) = 10.49, p = .002, ηp 2= .173 (see Fig. 1). Levene’s test for equality of variances indi- cated that the assumption of homogeneity of variance was vio- lated, so we further examined our predictions using unequal-variance t tests. Consistent with our predictions, results showed that individuals in the control condition allo- cated more money to the present-oriented charity (M = $257.77, SD = $249.79) than to the future-oriented charity (M = $100.00, SD = $173.21), t(20.38) = 1.95, p = .065; in contrast, participants in the death-prime condition allocated significantly more money to the future-oriented charity (M = $235.71, SD = $223.98) than to the present-oriented charity (M=$40.00,SD=$80.97),t(17.35)=3.01,p=.008.Inaddi- tion, individuals in the death-prime condition allocated more money to the future-oriented charity than did individuals in the control condition, t(24.19) = 1.86, p = .076.

Study 2.

The beneficence scores were submitted to a 2 (prime) × 3(recipient) between-subjects analysis of variance. The analysis revealed no main effects and a significant interaction, F(2, 65) = 3.17, p = .049, ηp 2 = .089 (Fig. 2). The pattern of means was as p expected. First, participants primed with death exhibited higher levels of beneficence when allocating to the other organization that would benefit in the future (M = 62.90%, SD = 21.13%) than when allocating to the other organization that would benefit in the present (M = 39.64%, SD = 24.92%), F(1,45) = 5.48, p = .024, ηp 2 = .109. Second, individuals in the death-prime condition allocated significantly more resources to the other organization that would benefit in the future than did individuals in the control condition (M = 38.09%, SD = 22.07%), F(1, 45) = 5.60, p = .02, ηp 2 = .11. Also consistent with our theoretical rationale, results showed that participants in the control condition exhibited greater beneficence to their own organization in the future (M = 58.42%, SD = 18.49%) than to the other organization in the future (M = 38.09%, SD = 22.07%), F(1, 39) = 4.73, p = .036, ηp 2 = .108, but this tendency was eliminated in the death-prime condition (future-self condition: M = 59.00%, SD = 27.67%), F(1, 39) = 0.15, p = .70, ηp 2 = .004.

**END OF SECTION A**

**You are provided with data from this replication of Experiment 1 from this article in an SPSS data file named: GC.Replication.sav.**

**Section B [45 marks]**

**B1.1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Effect | F statistic | df  *write as (x,y)* | p value | Eta-squared\* |
| **Distraction** |  |  |  |  |
| **Beverage** |  |  |  |  |
| **Interaction** |  |  |  |  |

**Question B2:**

**B2.1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Distraction | Mean | Standard Deviation | Median | Skewness |
| **None** |  |  |  |  |
| **Medium** |  |  |  |  |
| **High** |  |  |  |  |

**B3** Run and report a detailed analysis of the **simple main effect** of distraction upon aggression in high-provocation situations, for participants who have consumed alcohol.

Answer

**END OF PAPER**