RM II Dr. Juhn

HOMEWORK 2

Due Date: 2/22/2017

1. Type your HW answers. Note: If you are having trouble finding the statistical notations and symbols, you can "hand-write" only the "stat symbols”, ie. sigma or mu etc. on the typed pages.   
  
2. Attach the SPSS outputs with your name written on each page. Order the SPSS output in the order of the questions.

3. You must staple your HW.

Use SPSS to answer the following questions. Alpha = .05.

1. Using the “HW 2 Data” posted on eLearning, conduct the appropriate analysis to examine the following:

Evaluate if ice cream sales, rainfall and the interaction of ice cream sales and rainfall can predict the

number of reported drownings. Report your results in APA format.

1. If you wanted to determine whether there is a difference between the amount of ice cream and the number of popsicles sold in a given month, what test would you conduct?
   1. Conduct the test and report your results in APA format.
2. Now, run a 3-step hierarchical regression analysis predicting reported drownings. Start with a simple regression model with the predictor “Rain”. For step 2, add in the predictor “Temperature”. For step 3, add in the interaction term for the predictor variables “Rain” and “Temperature”. Report the results of your hierarchical regression model using the table bellow. Make sure to report the standardized regression coefficients and their corresponding p vales.

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| --- | --- | --- | --- |
|  | **Step 1** | **Step 2** | **Step 3** |
| Rain | b=-.73, p<0.001 | b=-.32, p=0.008 | b=.69, p<0.001 |
| Temperature | \*\*\* | b=.63, p<0.001 | b=.98, p<0.001 |
| Rain x Temperature | \*\*\* | \*\*\* | b=-0.90, p<0.001 |
| *Adj R2* | 0.52 | 0.74 | 0.88 |
| *Adj R2 change* | 0.53 | 0.76 | 0.89 |

1. Determine if average monthly temperature mediates the relationship between ice cream sales and reported drownings. Create two separate diagrams to support your findings, report the relevant *b*, *p*, and *R2* for each path. For this question you can make your diagrams by hand or digitally.