1 Confidence Interval for π using SPSS

This is not as straight forward as one might think!
Assume we have a sample size of $n = 30$ and the number of successes $y = 10$. Goal to get a 95% confidence interval for π the proportion of successes in the population.

1. **Enter the data**
   Use a new spreadsheet, click on the Variable View tab in the lower right of the spreadsheet and create two variables (e.g.) "response", and "count".

   Click on the Data View tab in the lower right corner and now enter the data

response	count
1	10
0	20

   With the interpretation: 1=success, 0=failure

2. **Set weight variable**
   Got to: Data>Weight Cases

   Choose your variable count as frequency variable, and click ok.

3. **Calculate the confidence interval**
   Go to: Analyze>Generalized Linear Model>Genralized Linear Model

   Click the radio button for "Custom"

   Choose Distribution : Binomial, and Link function: Identity

   Click the Response tab at the top of the pop-up window

   Choose variable response as the Dependent Variable

   Click on radio button Binary

   Click OK, a window will pop up, asking if you want an intercept only model, answer "yes"

4. **Read the output**
   In the table on Parameter Estimates check the line on the intercept, it has the confidence interval. In this case [0.498, 0.835].