The Relationship Between Attraction, Symmetry, and Facial Expressions
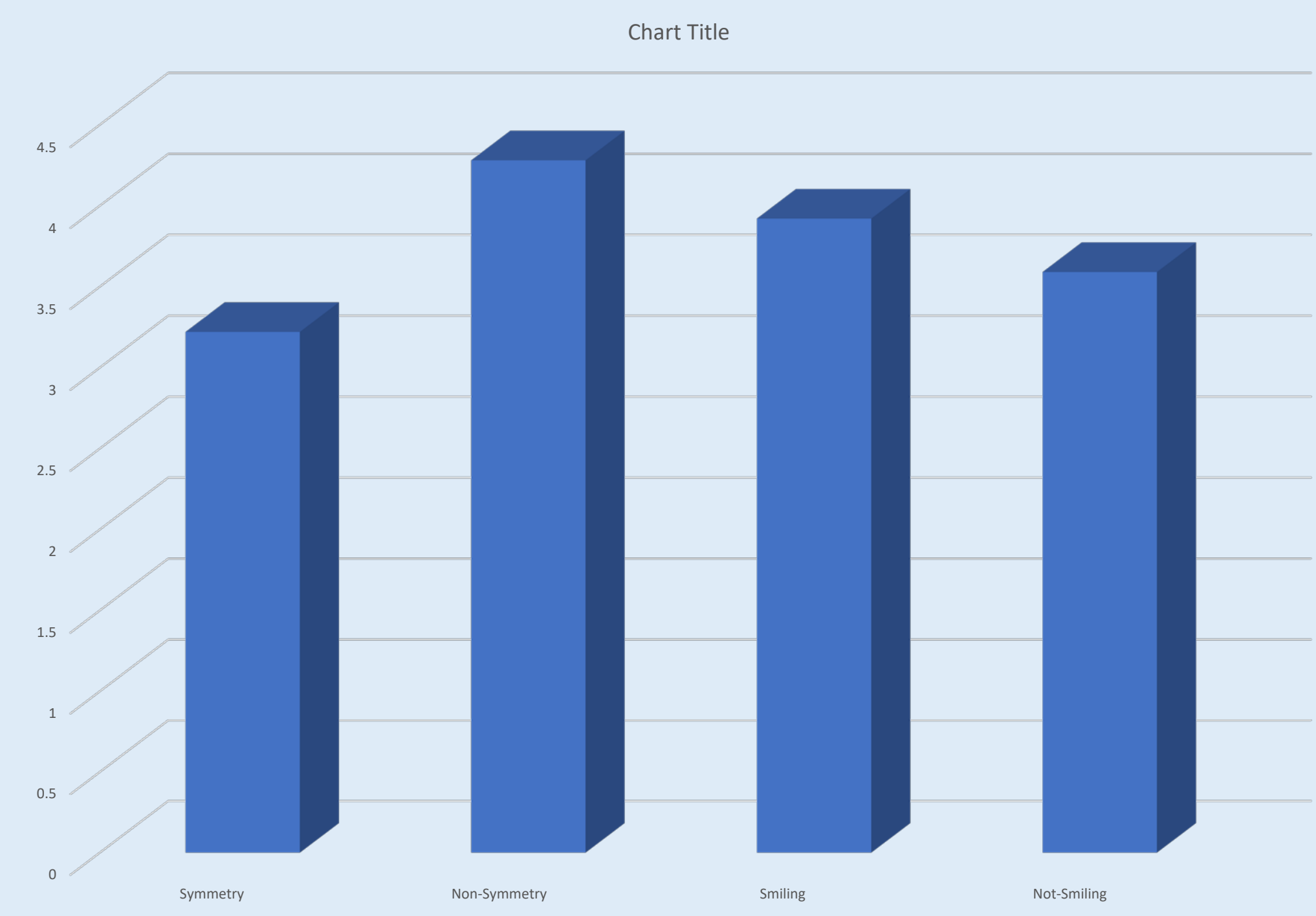
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Introduction:

- Physically attractive people are known to have an advantage in our society. They benefit socially, sexually, and even in employment success/opportunities (Song et al., 2019).
  - The scale of symmetry was directly related to the scale of attractiveness, the more symmetric the more attractive they were found (Mealey et al., 1999).
  - The results of the study were that the unattractive person who was smiling strongly was found equal or even more attractive, than the conventionally attractive person who was not smiling. (Golle et al., 2014).
  - An interesting finding from Ekman et al., (1981), was that when a person deliberately smiles or makes a facial expression, it shows more asymmetries in the face than spontaneous emotions (Ekman et al., 1981).
- Hypotheses:
  - First it is hypothesized that there will be a significant higher rating of attractiveness in the individuals who have more symmetry compared to the individuals who have less/no symmetry.
  - It has also been predicted that there will be a significantly higher rating of attractiveness in the individuals who are smiling (happy expression) compared to the individuals who have a straight face (neutral expression)
  - An interaction hypothesis between facial symmetry and facial expressions. It may be that facial symmetry depends on facial expressions
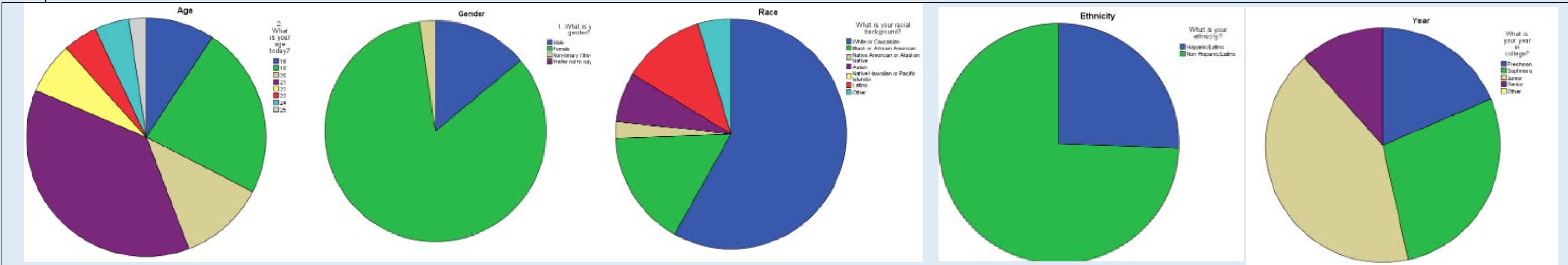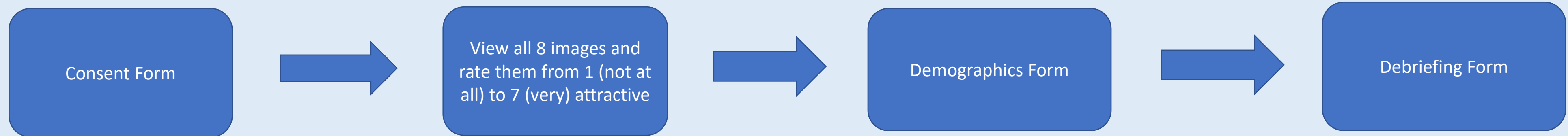
Method:

Participants:

Measures/Manipulations:

- Attractiveness- Attractiveness is the quality of being pleasing to the senses, physically. This will be measured by using 1 (*not at all*) to 7 (*extremely*) attraction rating scale (Goetz et al., 2012).
- Symmetry- Symmetry will be manipulated by using a phone app called "Face Symmetry". The description of the photos should be moved to the measures section.
- Expressions- In this study facial expressions will be manipulated by telling the individuals whom are being photographed to; keep a neutral face, or to smile.

Procedure:

Results:

Descriptive Statistics

	Mean	Std. Deviation	N
Smil_Sym	3.3488	1.54510	43
Non_Sym	3.0930	1.25478	43
Smil_Non	4.4884	1.46989	43
NonNon	4.1047	1.37822	43

A repeated measures ANOVA assessed the differences in mean attractiveness ratings among the eight images. The results of the ANOVA indicate the non-symmetrical ratings of attractiveness (M= 4.28, SD= 1.43) to be significantly higher compared to the symmetrical ratings (M= 3.22, SD= 1.40), $F_{(1)}$= 31.57, p= .00, n^2=.43. The results also indicated that smiling expressions (M= 3.92, SD= 1.51), were rated significantly higher than non-smiling (M= 3.59, SD= 1.32), $F_{(1)}$= 5.51, p= .02, n^2= .12. Lastly, the ANOVA did not find a significant interaction between symmetry and expression, $F_{(1)}$= .36, p=.55, n^2= .01, (see plot 1 for reference to interaction).

Discussion:

- Hypothesis 1 stated that the more symmetrical the face the higher the attractiveness ratings would be. It was found that the un-symmetrical faces were rated significantly higher (M= 4.28, SD= 1.43) compared to the symmetrical faces (M= 3.22, SD= 1.40), $F_{(1)}$= 31.57, p= .00, n^2=.43.
- Hypothesis 2 discussed that facial expressions (smiling) was going to be found as more attractive compared to not smiling. As hypothesized, smiling expression was rated significantly higher (M= 3.92, SD= 1.51) compared to the non-smiling images (M= 3.59, SD= 1.32), $F_{(1)}$= 5.51, p= .02, n^2= .12.

Limitations:

- Internal threat of order effects (counter balanced, by mixing up the images)
- Threat to internal validity of a design confound (other factors of attractiveness could have played a role)
- Threat to external validity (not generalizable with only two people for the images)

Future Research:

- Having more images of individuals with symmetry and facial expression
- Could compare people who are naturally symmetric and naturally not symmetric, this way it will relate to the real world more effectively, and the images will be more natural

Implications:

- I/O psychology when trying to market products. They may want to know what is deemed as more attractive, to make their product look more attractive on the model that is picked.
- This study also relates to everyone in the world being curious about what is attractive, who is attractive, and if you yourself are attractive. That is the question on everyone's mind, and this experiment could help people understand why certain people or certain facial expressions may be attractive

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