Correlations between Facial Asymmetry, Extraversion, and Sexual Attitudes

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Abstract: Do individual levels of extraversion and facial asymmetry influence general sexual attitudes? Studies exploring this question have found positive correlations between extraversion and sexual promiscuity, extraversion and attractiveness, and attractiveness to facial symmetry. It could be hypothesized that sexual attitude, in particular openness to sexual experimentation and promiscuity, is positively correlated with extraversion and facial symmetry in both men and women. In a survey of college students aged 18 to 24, it was found that both facial asymmetry and extraversion was positively correlated with openness to sexual experimentation.

Introduction

In the past century, we have seen an influx of research on topics that many consider elusive and fascinating: human attractiveness, personality differences, and trends in sexual attitude across individuals. We have begun to explore what exactly humans find attractive about one another. Various studies have questioned if the symmetry of one's face has any influence on other's perceptions of beauty and found that people tend to perceive more symmetrical faces as more aesthetically pleasing (Kowner 1996, 663) Studies have also found significant correlations between extraversion and perceived attractiveness, both in men and women (Lukaszewski, Roney 2010, 412). According to some research, extraversion is also correlated with promiscuous sexual behavior (Schmitt 2004, 303).

All of this research raises the question if these three variables, facial symmetry and perceived attractiveness, extraversion, and openness to sexual experimentation, are correlated with one another. This study looks specifically at the effects of facial symmetry and extraversion on an individual's attitude toward sex, either for or against behaviors such as entertaining spontaneous sexual partners or having sexual intercourse while under the influence of substances. The proposed hypothesis is that regardless of gender, facial symmetry and extraversion will both be positively correlated with openness to sexual experimentation.

Method

The participants used in this study were all students at the University of Illinois at Urbana-Champaign, aged between 18 and 24. In total, our sample was made up of 20 individuals, ten male and ten female. The participants were picked via random draw from a pool

of volunteers and were afterwards given a number to denote themselves when filling out the survey.

In order to measure facial asymmetry, pictures of each of the participants were taken with cameras standard in mobile phones. The pictures were taken on a blank or neutral background with direct lighting. Each photo was taken with the camera at eye level with the participant and with the participant's nose at the center of the shot. These photos were then uploaded to a copy of Adobe Photoshop CC where the ruler tool was used to measure the distance between each pupil and the center of the tip of the nose. The ruler tool was set to measure inches. The difference between the two measurements was taken then made an absolute value. For the sake of this study, we were not concerned with which side the face was higher, or more asymmetric, than the other. The higher the value, the more asymmetric the face is in regard to eye height and distance from the nose.

To measure extraversion and openness to sexual experimentation and experience among the participants, they were made to take an online survey. The survey presented 20 questions, ten that tested for extraversion and ten that tested for sexual attitude. The questions concerning sexual attitude polled the participants for their personal opinion of the types of sexual partners they look for, their willingness to engage in risky sexual behavior, and the types of places they looked for sexual partners, and the kind of emotional relationship they preferred with a sexual partner. A higher score in sexual attitude indicated a willingness to engage in risky sexual behavior and/or sexual partners they did not have any or little emotional investment in. A higher score in extraversion indicated the person engaged in more extraverted behavior than introverted. Each question was presented in form of a statement that the participant could strongly agree, agree, disagree, or strongly disagree with. No neutral answer was presented and participants were

asked to answer every question. At the end of the survey, the participants were asked their

participant number so we could match their facial asymmetry value with the rest of their data

during analysis.

Results

The mean extraversion score of all our participants was 2.821 with a standard deviation

of 0.328, meaning in total our sample was slightly more introverted with little variation across

the sample. In terms of facial symmetry, our sample had an average of 0.404 inches of difference

between the distances of both their pupils to the tip of their nose. The standard deviation among

the sample was 0.338 inches. For sexual attitude, the general average was a 2.460 with a standard

deviation of 0.312. Our sample was less sexually open and less likely to take risks involving sex

according to this data.

	N	Minimum	Maximum	Mean	Std. Deviation
Sexual Attitude	20	1.90	3.00	2.4600	.31187
Extraversion	20	2.25	3.50	2.8210	.32797
Facial Asymmetry	20	.052	1.136	.40365	.337847
Valid N (listwise)	20				

Descriptive Statistics - All Sample

Across the entire sample, we found a significant positive correlation between openness to

sexual experimentation and facial asymmetry ($r = 0.415$). This stands in contrast to the

hypothesis that facial symmetry and sexual attitude would be positively correlated. Correlations

between sexual attitude and extraversion and between facial asymmetry and extraversion were

insignificant, with $r = 0.279$ and $r = 0.243$ respectively. The equation of the regression line is

Y = 1.814 + .18 x (extraversion) + .341 x (absolute value of facial asymmetry). In this equation

Y represents sexual attitude.

		Sexual Attitude	Extraversion	Facial Asymmetry
Sexual Attitude	Pearson Correlation	1	.279	.415
	Sig. (2-tailed)		.233	.069
	N	20	20	20
Extraversion	Pearson Correlation	.279	1	.243
	Sig. (2-tailed)	.233		.302
	N	20	20	20
Facial Asymmetry	Pearson Correlation	.415	.243	1
	Sig. (2-tailed)	.069	.302	
	N	20	20	20

Correlation Table – All Sample

When analyzing only the female half of the sample, the data shows stronger positive

correlations between facial asymmetry and extraversion (r = 0.337) and between sexual attitude

and facial asymmetry (r = 0.492) when compared to the entire sample. This contradicts the

proposed hypothesis that correlations would be the same across the sexes. However, the

correlation between extraversion and sexual attitude is still insignificant (r = 0.280). The

equation for the regression line is Y = 1921 + .113 x (extraversion) + .443 x (absolute value of

facial asymmetry).

		Sexual Attitude	Extraversion	Facial Asymmetry
Sexual Attitude	Pearson Correlation	1	.280	.492
	Sig. (2-tailed)		.434	.149
	N	10	10	10
Extraversion	Pearson Correlation	.280	1	.337
	Sig. (2-tailed)	.434		.341
	N	10	10	10
Facial Asymmetry	Pearson Correlation	.492	.337	1
	Sig. (2-tailed)	.149	.341	
	N	10	10	10

Correlation Table – Female Sample

Among the male half of the sample, the correlation between sexual attitude and facial asymmetry was still significant ($r = 0.321$), but it was far lower than the same correlation for the female half. The correlation between sexual attitude and extraversion was still insignificant ($r = 0.299$), though it was higher than the same correlation for women. The correlation between extraversion and facial asymmetry decreased drastically for the male sample ($r = 0.162$) when compared to the female sample and the sample overall. The equation of the line of regression is $Y = 1.701 + .253$ x (extraversion) + .238 x (absolute value of facial asymmetry).

		Sexual Attitude	Extraversion	Facial Asymmetry
Sexual Attitude	Pearson Correlation	1	.299	.321
	Sig. (2-tailed)		.401	.366
	N	10	10	10
Extraversion	Pearson Correlation	.299	1	.162
	Sig. (2-tailed)	.401		.655
	N	10	10	10
Facial Asymmetry	Pearson Correlation	.321	.162	1
	Sig. (2-tailed)	.366	.655	
	N	10	10	10

Correlation Table – Male Sample

Discussion

To summarize our findings from the data, we found that sexual attitude and facial asymmetry are positively correlated with the correlation being stronger in our female sample and weaker in the male sample. Sexual attitude and extraversion showed no significant correlation across any of the samples. Facial asymmetry and extraversion showed a significant positive correlation in the female sample, while showing an insignificant correlation in the male sample.

Overall, the results contradict most of the hypothesis the study began with. Firstly, the results were varied across the line of gender, and each half of the sample showed large differences. Secondly, the data indicates that openness to sexual experimentation and facial asymmetry, not facial symmetry, are positively correlated. Sexual attitude was seemingly unaffected in any significant way by an individual's level of extraversion. And while facial asymmetry and extraversion were significantly positively correlated in the case of the female sample, it seems that this has no effect on the individual's attitudes toward sexual intercourse.

Our findings go against prior research and assumptions we went in with when we began the study. A possible explanation for why it seems that sexual attitude is correlated with facial asymmetry is that those who are less attractive feel that they can be less picky about their potential sexual partners and are thus more open to behaviors that others might be wary of. Another possible explanation is that a small amount of facial symmetry is actually viewed as attractive as opposed to absolute symmetry.

It is worth noting that our sample size was very small, and if we were to attempt this study again, there would need to be a definite increase in the amount of participants. The average extraversion score of our sample was also slightly lower than anticipated, and the average openness to sexual experiences was also much lower than expected. Our sample was rather homogenous in their opinions and personalities, and again adding more participants may lead to more accurate results if this study proves to be faulty in its findings.

Bibliography

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