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## **PERSONALITY DIFFERENCES BETWEEN MALES AND FEMALES BASED ON BIG FIVE FACTORS – AN EMPIRICAL STUDY**

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### **Abstract**

*This paper takes a look at the personality traits that are given through the Big Five personality test. It studies the gender differences present in students between the age group of 18-25. The data was collected through Two-Stage stratified random sampling (N=100, Males=41, Females=59). Descriptive Analysis was done from which Females were found to score higher in the traits of Agreeableness, while Males scored higher in the traits of Adjustment, Openness, Sociability and Conscientiousness. The differences were studied at a social level and evaluated keeping in mind the previous findings. These findings help to evaluate the gender differences that occur on a trait level and give a better understanding of social systems that occur between males and females. Such an understanding can help contribute to the breaking of societal structures that occur in modern India.*

### **Keywords**

Personality, Gender, Big Five, Differences

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## **1. Introduction**

Many people perceive the differences between men and women to be large. There have been countless examples from current culture that reinforce this view of extreme differences between the sexes – but is it accurate? Men and women obviously have different roles in society but there is an underlying psychological difference that can only be evaluated through empirical research.

A study of gender differences can be done with the help of differences in personality. The personality of an individual often lies in the high-low level of their traits. Traits are the consistent patterns of thoughts, feelings, motives, and behaviours that a person exhibits across situations (Fleeson and Gallagher, 2009). Here this means that an individual scoring high on a particular trait will have that trait more dominant in them as opposed to an individual who scores a low in that trait. The purpose for such a study is to evaluate the differences between the two opposite genders on a more general and broad spectrum.

Gender differences in terms of mean differences do not imply that men and women only experience states on opposing ends of the trait spectrum; on the contrary, significant differences can exist along with a high degree of overlap between the distributions of men and women (Hyde, 2005). Some traits may not have, much of a difference while others may have a vast difference. In terms of the average, it cannot be possible to have two opposite ends of the trait spectrum. As human beings, the trait will be present in us even if it is at a very low amount. The difference may come by just a mean difference of 0.1. Even so, it means that there is a minute difference between the general population and their behaviour but at a more specific pattern.

In another study, it was said gender differences were found suggesting that women, on average, had shown higher levels of neuroticism, extraversion, and agreeableness, while men were more open to experience (Lehmann, et.al., 2013). By observing the gender roles expected by the society, people begin to form their own beliefs or expectations. An example can be that in most industrialized societies, women are seen to perform more childcare activities than those performed by the man. Hence, women are perceived as more nurturing and caring. It is also given that men have higher paying and higher status jobs in society, they are perceived as more assertive and dominating. These gender roles then influence an individual's social and biological behaviour. It can also be seen that in social interaction, people respond better to individuals who are conforming to the societal gender expectations (Wood & Karten, 1986). Based on this these gender roles become imbibed into the personal

identities of men and women which can bring about a change in personality (Witt & Wood, 2010; Wood, Christensen, Hebl, & Rothgerber, 1997). At a biological level, hormone processing also affects the creating and following of such gender roles (e.g., testosterone increases in women and men before athletic competitions; see review in Wood & Eagly, 2012).

In 1940, Raymond Cattell brought 16 personality factors into the world of psychology. From this, Ernest Tupes and Raymond Christal deduced that there were five broad factors covering them all. They labelled them Surgency, Agreeableness, Dependability, Emotional Stability and Culture. From this, Warren Norman gave the term Conscientiousness instead of Dependability. This is how the Big Five Personality test came to be.

With the help of the instrument Big Five, the study of gender differences can be done easily under the broad parameters that are offered. Namely - Neuroticism, Extraversion, Openness/Intellect, Conscientiousness and Agreeableness. Each broad heading offers different aspects of a personality which can be used to draw conclusions on the differences between Males and Females.

### **1.1 Gender Differences in Big Five Personality Traits**

It is important to understand personality differences to gain a better knowledge of basic differences that we may come across in our daily lives.

#### **1.1.1 Neuroticism/Adjustment**

Neuroticism defines the tendency to experience negative emotion in response to perceived threat; these include anxiety, depression, anger, self-consciousness, and emotional liability. Such people respond poorly to stressors and are prone to see ordinary situations as threatening. They respond emotionally to events and their reactions are more intense than normal. These people face problems in making decisions and thinking clearly.

#### **1.1.2 Agreeableness**

Agreeableness comprises of traits relating to empathy and kindness. Agreeableness involves the cooperation, maintenance of social harmony, and consideration of the concerns of others. It measures how compatible they are towards others or their ability to get along with others. Such people value getting along with other people and are therefore considered to be more warm, open, helpful, optimistic, etc.

#### **1.1.3 Conscientiousness**

Conscientiousness is the trait related to self-discipline, organization, and the control of impulses. It reflects the ability to show self-control in order to follow rules or maintain the

pursuit of any goal. Impulses cannot be said to be bad, but there are moments where split decisions are a necessity. Such people are good at making such judgements.

#### **1.1.4 Extraversion/ Sociability**

Extraversion shows assertiveness, and positive emotionality, all of which have been linked to sensitivity to rewards (Depue and Collins, 1999; DeYoung and Gray, 2009). Whereas gender differences are small on the overall, the small effect size could be due to the existence of gender differences at a trait level. Social people enjoy being with others and are often seen as to be full of energy. They are also categorized as active and enthusiastic.

#### **1.1.5 Openness**

Openness refers to an individual's imagination, creativity, intellect and appreciation of aesthetic experiences. Broadly, Openness relates to the ability and interest in processing stimuli that is complex. When compared to closed people, we are able to see that they are more aware of their emotions. They also have a tendency of thinking and acting in individualistic and non-conforming ways.

Any previous study that has been conducted is not devoid of any controversy. There have been many debates about the differences that may have been brought due to cultural, social and age differences. Evolution has also played a part in the change of certain roles and characteristics that we have grown to see in our current society. However, there is still a certain form of black-and-white plainness that still exists in most male dominant cultures. Women have thought to be the homemakers, only to cook, clean and raise children; while Men have been believed to be the breadwinners who support the family. Women as more caring, passionate, soft, careful, etc. and men as more aggressive, assertive, pushy, dominating, etc. Other theories suggest that gender norms are shaped by socio-cultural influences, such that women and men are expected to serve different roles in society and are therefore socialized to behave differently from one another (Wood and Eagly, 2002; Eagly and Wood, 2005).

## **2. Objectives**

To study the personality differences between male and female students of Ahmedabad and Gandhinagar, India between the ages of 18 to 24 under the broad aspects of Big Five namely,

- Adjustment (Neuroticism)

- Sociability
- Openness
- Agreeableness
- Conscientiousness

### **3. Hypotheses**

H<sub>1</sub> - Males tend to be more neurotic than Females

H<sub>01</sub> – Males do not tend to be more neurotic than Females

H<sub>2</sub> – Males tend to be more sociable than Females

H<sub>02</sub> – Males do not tend to be more sociable than Females

H<sub>3</sub> – Males tend to be more open than Females

H<sub>03</sub> – Males do not tend to be more open than Females

H<sub>4</sub> – Males tend to be more agreeable than Females

H<sub>04</sub> – Males do not tend to be more agreeable than Females

H<sub>5</sub> – Males tend to be more conscientious than Females

H<sub>05</sub> – Males do not tend to be more conscientious than Females

### **4. Methodology**

The participants (N=100; Males=41, Females=59) were collected from the areas of Ahmedabad and Gandhinagar, Gujarat via Two-Stage Stratified random sampling. They were students between the ages of 18 to 24. The subjects were given the test in a similar environment and were instructed to select the trait which best describes them according to the test. The subjects were all taken from the duration of college years or already graduated. The mean age for Males was 19.78 with a standard deviation of 1.199. The mean age for Females was 19.661 with a standard deviation of 1.296. All the subjects were of Indian ethnicity. They were asked to give personal information such as their name, age, gender and an e-mail address for reference. The Big Five personality questionnaire was given to them and they answered to the best of their knowledge. Because there was a wish to find the gender

differences between the big five traits, dummy variable was used. It is a categorical variable that is why this technique is most suitable for technical analysis.

## **5. Results and Discussions**

As a basis of analysis, Dummy Variable Regression was used. It has been conducted due to the objective of the study being to find the gender differences between personality traits, as it is a categorical variable. Each trait has been evaluated using regression and the results found have been stated below.

Here females have been assigned the value of 0 and males have been assigned the value of 1. That is why the benchmark category against whom comparison would be made are females. In this model, the intercept value gives the mean value of the benchmark category. The results have been calculated using the formula below –

$$Y_i = \alpha + \beta D_i + u_i \quad (1)$$

### **5.1 Adjustment/ Neuroticism**

Here, Y represents adjustment, D represents gender where D=1 as Males and D=0 as Females. Thus,

$$Y_i = 12.18 + 0.95D \quad (i)$$

Here the mean adjustment of females has been found to be 12.18% and of males 13.13%. This implies that the adjustment factor/trait among Males is higher from Females by 0.95%. Neuroticism increases during emerging adulthood among females, but not males (Soto et al., 2011), which may explain this pattern of results. This is the age for emerging adults, just coming above their teenage years. Adjustment is the ability for an individual to adapt to the surrounds to a level of comfort. This trait also includes neuroticism and facets such as withdrawal and volatility. It is here that females tend to score higher, in anxiety, self-consciousness, etc. However, the present data deals with males having more neuroticism than females. This can be seen because India is going through a phase of change. The current society has females who consider themselves to be at par with males. This shows a trend to gender role reversal. Thus, from this we are able to accept our working hypothesis that Males tend to be more neurotic than Females.

### **5.2 Sociability**

Here, Y represents sociability, D represents gender where D=1 as Males and D=0 as Females. Thus,

$$Y_i = 12.50 + 0.10D \quad (ii)$$

Here the mean sociability of females has been found to be 12.50% and of males 12.60%. This implies that the sociability factor/trait among males is higher from females by 0.10%. Sociability includes facets such as enthusiasm and assertiveness. Generally, females tend to be more enthusiastic in terms of sociability, positive emotions, etc. Assertiveness is the tendency to be more aggressive and dominant. Previous research suggests males are more prone to be assertive and excitement seekers, however in general it have been noted that on the broader aspect females tend to be more sociable than males. Here it can be seen that males have scored higher. This show that from the sample taken, males show more aggression and socialness than females. Despite India going through a phase of change, there are still some reminders of previous male dominant society where males are seen as more social animals. If the woman tries to follow the standard for males, she is not given equal opportunities. This leads us to accepting our working hypothesis that Males tend to be more sociable than Females.

### **5.3 Openness**

Here, Y represents openness, D represents gender where D=1 as Males and D=0 as Females. Thus,

$$Y_i = 14.37 + 0.40D \quad (iii)$$

Here the mean openness of females has been found to be 14.37% and of males 14.77%. This implies that the openness factor/trait among males is higher from females by 0.40%. Openness includes facets such as aesthetics, feelings, ideas, etc. Generally, females score higher on the facet of aesthetics and feelings, while males score higher in the trait of intellect. Previous findings also state that openness difference between males and females exists at a low level. From the Indian perspective, we can see that males are more open in the present society. They are given higher opportunities and value than females. As India is a male-dominant society, the males present show a higher level on traits such as ideas and intellect from the trait of openness. From the results we are able to see that the working hypothesis has been accepted that Males tend to be more open than Females.

#### **5.4 Agreeableness**

Here, Y represents agreeableness, D represents gender where D=1 as Males and D=0 as Females. Thus,

$$Y_i = 14.83 - 0.14D \quad (\text{iv})$$

Here the mean agreeableness of females has been found to be 14.83% and of males 14.64%. This implies that the agreeableness factor/trait among females is higher from males by 0.14%. Agreeableness includes facets such as compassion, politeness, warmth, etc. Compassion means the tendency to relate on an emotional level and have traits of warmth and empathy. Politeness is the tendency to show compliance and cooperation. Generally, females score higher on this scale which show that women tend to be more trusting and compliant than males. This shows that the females present for the study believe themselves to be more trusting and empathetic than males. From early childhood, it is instilled in the female to be more compliant and cooperative towards what parents, in-laws or elders suggest. It is also widely seen that females are more emotional than males. From the results, our working hypothesis has been rejected. So here we can say our null hypothesis that Males do not tend to be more Agreeable than Females is accepted.

#### **5.5 Conscientiousness**

Here, Y represents conscientiousness, D represents gender where D=1 as Males and D=0 as Females. Thus,

$$Y_i = 14.28 + 0.56D \quad (\text{v})$$

Here, the mean conscientiousness of females has been found to be 14.28% and of males 14.84%. This implies that the conscientiousness factor/trait among males is higher from females by 0.56%. Conscientiousness includes facets such as being thorough, careful or vigilant. Such people are efficient and organized. It includes aspects or industriousness and orderliness. It is generally seen that there is no major difference between males and females but here we can see that males have scored higher. This shows that the males included in the study have a more careful and efficient method of processing than the females. Thus here we accept our working hypothesis that Males tend to be more conscientious than Females.

### **6. Conclusion**

By evaluation we have established that there are several trait gender differences occurring in existing society. Here, using dummy variable regression we are able to see the



differences between the traits in Males and Females. We are able to conclude that from the sample taken, Males have ranked higher on traits such as Neuroticism, Sociability, Openness and Conscientiousness. Whereas Females have ranked higher only in the trait of Agreeableness. There are different social factors that come into perspective and that can be said to be the reasoning behind the differences for personality traits across cultures. With these findings, we are able to deduce the personality differences between males and females based on big five factors.

## **7. Limitations and Future Directions**

### **7.1 Limitations**

- The research was limited to students on 18 to 25 years, a wider age group could have been taken to get more comprehensive results.
- The subjects were limited to only the areas of Ahmedabad and Gandhinagar, India.
- The test was limited on the basis that it only took into account five factors of personality which are very broad.
- Only dummy variable regression has been used for analysis.
- The analysis has been done by self—measure.

### **7.2 Future Directions**

- Different ethnicities can be taken into account with a comparative analysis done with Indians to get a more diverse difference between both cultures and gender.
- A research could be done as to why such gender differences occur.
- There can be an analysis done between the different age groups and their gender differences.

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