Big five personality traits

Empathy is important in day to day interaction with people and personality was believed to have strong relationship with empathy. To investigate whether there are any correlation between empathy and agreeableness as well as between empathy and neuroticism, 76 psychology students took part in a personality and empathy assessment. All the participants completed the NEO-FFM and ' Reading the Mind in the Eyes Task'. As hypothesized, participants who scored higher in agreeableness were more empathetic. However, contrary to the second hypothesis, results showed that neurotic people tend to be less empathetic as opposed to previous studies that showed no correlation between empathy and neuroticism. Arguably, since neuroticism is associated with anxiety, it might have a negative impact on empathy.

The association between empathy and the big five personality traits

In order to be successful in life, one must possess an important characteristic, and that is empathy (Maccoby, 2001). According to Del Barrio, Aluja and Garcia (2004), empathy can be defined as the awareness and understanding of the thoughts and feelings of other people. Therefore, Zdenek and Helena (2008) suggest that empathy is vital in day to day interaction with people and also aids in the formation of healthy relationships. Personality is often expected to have a reciprocal relationship with empathy (Del Barrio et al., 2004). Hence, personality is one of the many factors that can affect how empathetic people are. The focus of this study will be on the relationship between empathy and agreeableness, as well as the relationship between empathy and neuroticism.

According to Costa, et al. (2001), the Five Factor Model is useful in describing the different personalities. The five factors are Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. Magalhaes, Costa and Costa (2012) suggest that agreeable people are often concerned of the welfare of others and are able to correctly identify other people's emotions, whereas people who are more neurotic tends to be worried and distrustful of relationships with others. Therefore, agreeableness is more likely to have a positive correlation with empathy (Del Barrio et al., 2004). Although characteristics of neuroticism are expected to have a negative impact on empathy (Magalhaes et al., 2012), the correlation between neuroticism and empathy remains unclear. (Del Barrio et al., 2004).

Several mechanisms could be used to explain the positive correlation between agreeableness and empathy. Nettle and Liddle (2008) suggested that there is positive correlation between agreeableness and social-cognitive aspect of " Reading the Mind in the Eyes". According to Baron-Cohen, Wheelwright, Hill, Raste and Plumb (2001), the " Reading the Mind in the Eyes" is congruent with empathy. Hence the research done by Nettle and Liddle serves to show that positive correlation between agreeableness and empathy as well.

Hall, Hutton and Morgan (2010), however, suggest that there were no relationship between emotion recognition and empathy. They proposed that emotion recognition is related to the duration and number of times the participants focused on the eyes region of the faces shown to them. Hall et al. (2010) asked the participants to identify the emotion in the facial morphs presented to them, and each facial morph had six answer choices: anger,

disgust, fear, happiness, sadness and surprise. However, these answer options were too simple and can be recognized universally (Waller, Cray Jr & Burrows, 2008). This lowers the difficulty of the test. Difficulty of the test should be increased through the incorporation of foil words, like what was done in Baron-Cohen et al. (2001) revised version of " Reading the Mind in the Eyes" test. Although Hull et al. made use of this particular test as well, there were few analyses done to the results and much of the research was focused on the duration the participants focused on the eyes of the face morphs. Therefore, if the research had focused more on the results from the " Reading the Mind in the Eyes" test, a conclusion similar to that of Nettle and Liddle (2008), might have been reached.

Although neuroticism can be expected to have a negative correlation with empathy (Jolliffe & Farrington, 2006), few researches have been able to reach this conclusion. Magalhaes, Costa and Costa (2012) suggested that since neuroticism is associated with apprehension and uncertainty with regards to relationships, it can be predicted that neuroticism will have a negative impact on empathy, thus having a negative correlation with empathy. However, the results of their research proofed otherwise. They found no direct relation between neuroticism and empathy. On the other hand, Jolliffe and Farrington (2006), have instead, found a slight positive correlation between neuroticism and empathy. This association reflects certain aspects of neuroticism such as guilt. Guilt can be triggered by empathy (Jolliffe & Farrington, 2006), and thus leads to the positive association between neuroticism and empathy.

In this study, I examined whether there is any association between empathy and the big five personality traits. Personality was measured using the NEO FFM test. While empathy was measured using " Reading the Mind in the Eyes" test that was revised by Baron-Cohen et al. (2001). For this study, my first hypothesis was agreeableness would have a positive correlation with empathy. Participants who score high on agreeableness would score high in empathy as well. My second hypothesis for this study was that neuroticism would have no correlation with empathy. Scores of neuroticism would have no effect on the scores of empathy of the participants.

Method

Participants

A total of 76 first year psychology students participated in this study as a course requirement. Participants were aged 19 – 25 years old (M = 22 years, SD = 2).

Materials

Participants completed NEO FFM personality measure and Empathy scale.

Personality. Participants completed a 60 item questionnaire assessing personality. This questionnaire involved the presentation of 60 statements (e. g., I am not a worrier. I often feel inferior to others), 12 for each scale from the NEO-FFM Test (Costa & McCrae, 1992). Participants were asked to read each statement carefully and each statement marks the option that best represents their opinion. Responses were scored on a five-point scale ranging from Strongly Disagree to Strongly Agree. The 60 items were used to

create scores for Neuroticism, Conscientiousness, Agreeableness, Openness to Experience, and Extraversion.

Empathy. In this study, empathy was assessed using the ' Reading the Mind in the Eyes Task' develop by Baron-Cohen, Wheelwright, and Jolliffe (1997). This task involved the presentation of 36 human eyes depicting a number of different facial expressions. Participants were instructed to ' choose which word best describes what the person in the picture is thinking or feeling' from five possible options. A total score of empathy was calculated by summing the number of correct responses for each participant. Higher scores are reflective of higher empathy.

Procedure

Participants completed this study in their first-year psychology tutorials. The questionnaire took approximately 20 minutes to complete.

Results

Table 1 shows the mean and standard deviation of empathy and the Big-Five personality traits.

Table 1

Mean and Standard Deviation of Empathy and the Big-Five Personality Traits

Mean

Standard Deviation

N

Empathy

26. 26

3. 30

76

Agreeableness

29. 99

4. 44

76

Neuroticism

23. 03

8. 41

76

Openness

27. 42

5. 90

76

Conscientiousness

29. 21

6. 28

76

Extraversion

28. 49

7. 29

76

As Table 1 indicates, the mean score for agreeableness was the highest amongst the participants, while the mean score for neuroticism was the lowest.

An examination on the scores for empathy and the agreeableness revealed a weak but significant positive correlation between these two variables. An analysis using Pearson's correlation coefficient supported this observation, $r(75) = .13, p < .05$.

Scores for empathy and neuroticism revealed a weak but significant negative correlation between these two variables. This was also supported with the Pearson's correlation coefficient, $r(75) = -.27, p < .05$.

Discussion

This study examined on the association between empathy and the Big-Five personality traits. Personality was assessed using the NEO FFM test (Costa &

McCrae, 1992), and empathy was assessed using ' Reading the Mind in the Eyes Task' developed by Baron-Cohen, Wheelwright and Jolliffe (1997). The results supported the first hypothesis that empathy would have a positive correlation with agreeableness, but did not support the second hypothesis that empathy would have no correlation with neuroticism.

Results from the study showed a weak positive correlation between empathy and agreeableness. This means that the higher the score of empathy, the more agreeable the participant was. This finding was consistent with previous research that showed increasing agreeableness with higher empathy scores (Del Barrio et al., 2004). Although result from the study showed only a weak positive correlation between empathy and agreeableness, the result was a significant one. The probability of obtaining this result due to chance was less than . 05. Therefore, it can be said that there was indeed a positive correlation between empathy and agreeableness. On the other hand, this finding is inconsistent with the results of Hall, Hutton and Morgan (2010) in which there was no correlation between empathy and agreeableness. However, the study done by Hall et al. (2010) focused on the duration participants looked at the eyes of the faces shown, rather than the interpretation of the emotions shown from the eyes of the faces shown to the participants. This difference in assessing procedure might have led to the difference in correlation results between empathy and agreeableness.

Results from the study showed a weak but significant negative correlation between empathy and neuroticism. This means that the lower the empathy score, the more neurotic the participant was. This did not support the second

hypothesis that was proposed for this study. This result was also inconsistent with previous research which showed that there was no clear correlation between empathy and neuroticism (Magalhaes, Costa & Costa, 2012). Since neuroticism is associated to traits like being anxious in social circumstances, Magalhaes et al. (2012) hypothesized that empathy will have a negative correlation with neuroticism. However, their results proved otherwise. They found no association between the two variables. Del Barrio et al. (2004) also found no clear association between empathy and neuroticism. Confounding variables might be the reason as to why results of this study differ from the results of researches that were done previously. Participants completed the NEO-FFM test in their psychology class, after a class quiz. This situation might have an impact on the NEO-FFM results of some of the participants. Since the questionnaire was done after the class quiz, the anxiousness and nervousness due to the quiz might have affected the mood of participants when they did the questionnaire. The results pertaining to neuroticism might have been affected, thus resulting in an inaccurate result for neuroticism for the NEO-FFM test.

There were still several limitations present in this study conducted, and these limitations might have affected the accuracy of the results obtained. Firstly, the sample size of 76 is too small to be representative of the relationship between empathy and the Big-Five personality traits of the population at large. A larger sample size could have been used to obtain a more accurate portrayal of the results for this study. Secondly, the empathy test was not done directly after the personality assessment test. It was self administered by the participants in their free time. The fact that the

administering of the empathy test was not in a standardized environment would have caused inaccuracy in the empathy scores collected for the study. Since the empathy test was an online questionnaire, participants might have been distracted by other internet platforms while doing the test. This might result in inaccurate empathy results as the test should have been done in a pleasant, stress free environment and in one sitting.

Future researches should carry out both the NEO-FFM personality test and empathy test in one sitting so as to obtain a more accurate portrayal of the personality and empathy results. Furthermore, future researches could assess whether the correlation between empathy and agreeableness as well as the correlation between empathy and neuroticism were affected by sex differences. Sample size for the study should also be larger to obtain results that are more representative of the population at large.

The observed correlation between empathy and agreeableness could be relevant to healthcare organizations in their selection of healthcare professionals. Organizations can expect people who are more agreeable to empathize and communicate better with the patients (Magalhaes et al., 2012).

In conclusion, this study showed that there was a weak but significant positive correlation between empathy and agreeableness. This result supports the theory that since both empathy and agreeableness and empathy are related to interpersonal skills, they should correlate positively. This study also showed a weak but significant negative correlation between empathy and neuroticism which goes against the results of studies done

previously. Limitations of this study that was mentioned earlier might have

led to the erroneous result. More research has to be done to determine if

there are any relationship between empathy and neuroticism.