Personality, Healthy Behavior, and Health:

A Study on College Students

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**Abstract**

Personality and health are two of the biggest parts of people’s lives that make them who they are. While these variables and how they interact are nothing new to psychology researchers, there is always more to learn. This study aims to determine how the Big Five personality traits interact with one’s engagement in healthy behaviors and how often someone experiences negative physical health symptoms. In order to do so, a self-report questionnaire with 39 items was administered online to 50 college-aged people. This study found that conscientiousness and emotional stability have strong relationships with engagement in healthy behaviors, and that openness to experience has the strongest relationship with experiencing health symptoms than any other Big Five trait. Further research with stronger reliability and a larger sample size should be conducted to establish the generalizability of these findings.

**Introduction**

This study examines the interactions between The Big Five personality characteristics, health-related behaviors, and physical health symptoms. Based on previous studies and knowledge about the topic, I predict to find that engaging in healthy behaviors will result in experiencing less negative physical symptoms. I also expect to see a strong, negative relationship between experiencing symptoms and conscientiousness. This would be because conscientious people are more likely to take better care of their health. I expect to see an opposite relationship between emotional stability and symptoms because stress causes negative physical symptoms and emotionally unstable people are typically more stressed.

Psychologists have studied personality and its relationship with health for a long time. As personality affects all aspects of one’s life, it only makes sense it would have an impact on health and health-related behaviors. Researchers studying these variables have found that there is in fact a relationship between personality characteristics and health.

One longitudinal study examined 1,515 men and their personality traits and physical health symptoms over a period of time that averaged 18.5 years. This study found that the cluster of emotionally stable participants were much less likely to experience physical health symptoms while aging. There were also a much lower numbers of smokers in this cluster, which suggests that emotional stability encourages healthier behavior (Aldwin, Avron, Levenson, & Cupertino, 2001). Another longitudinal study found similar results with health and conscientiousness. This study conducted on 759 men and women who scored high in conscientiousness as children found they were less likely to engage in health damaging behaviors throughout their lifetime (Hampson, Edmonds, Goldberg, Dubanoski, & Hillier, 2015).

This study hopes to add to the current knowledge regarding the connection between the three topics. This study was also conducted primarily on college age students, which is an especially interesting demographic to study when it comes to health-related behaviors. In order to examine the three variables in this demographic, a self-report survey regarding the topics was administered online. Correlations were found to determine the relationships between the three variables.

**Method**

A self-report questionnaire was created containing 35 items regarding personality characteristics, health-related behaviors, and physical symptoms. The first 16 items asked about the Big Five personality traits. There was 5 items about emotional stability, 5 items about conscientiousness, 2 items about extraversion, 2 items about agreeableness and 2 items about openness to experience. These items were scored with a rating scale from 1-4, 1 being “Strongly Disagree”, 2 being “Disagree”, 3 “Agree”, and 4 being “Strongly Agree”. Half of the 16 items were reverse scored in order to avoid rating errors. The next 5 items regarded health-related behaviors. Some of these items measured healthy behaviors like “I eat healthy.” while others measured unhealthy behaviors like “I drink alcohol.”. These were scored on a rating scale from 1-4, 1 being “Never”, 2 being “Sometimes”, 3 being “Often” and 4 being “Routinely”. The last 14 questions asked about how often the participant experiences various physical symptoms. These items were taken from the Pennebaker Inventory from Limbic Languidness, and asked about general body pain, as well as other physical symptoms including indigestion, ringing in ears, and feeling faint. This was scored on a rating scale from 1-5, 1 being “Never”, 2 being “Less than 3 or 4 times per year”, 3 being “Every month or so”, 4 being “Every week or so”, and 5 being “More than once every week”. This survey was created online and distributed through a website link to people known to the research team.

This survey was taken by 50 people, 62% being female and 38% being male. Of these 50 participants, 88% were Asian/Pacific Islander and 12% were other ethnicities. Almost everyone who took this survey were college students (96%), and their ages averaged at 21 years old.

**Results**

In order to analyze this data properly, composite variables needed to be created, which was done by finding the averages of the items regarding the individual personality traits per person. In order to create a composite score for health-related behaviors, I also averaged out the different behaviors per person. I finally did so for the self-report scores of frequency of negative health symptoms. Before doing this, I found the Crohnbach’s Alpha to determine the reliability of the composite variables. The emotional stability and extraversion composite variables both had an Alpha greater than .70 (.778 and .758). Conscientiousness scored right below the cutoff at .687, but the openness to experience and agreeableness composite scores fell far below that. Similarly to conscientiousness, the composite variable for the various health-related behaviors, Frequency of Healthy Behaviors, fell at .659. The low scores in reliability is an area to improve on for future studies.

The sample of college students scored moderately for almost all of the variables. The average score for emotional stability was 2.56 (out of 4) with a standard deviation of .57. The average for conscientiousness was 2.64 with an SD of .49. Participants rated themselves on average 2.70 out of 4 for extraversion, with 68% of students falling within .71 above and below that score. Students scored themselves more agreeable, with an average of 3.19 and standard deviation of .49. The final personality traits measured was openness to experience, which averaged a score of 2.77 and SD of .56.

Results for health-related behaviors found that most of the participants varied on which healthy behaviors they routinely engaged in. Most participants rated themselves as often not having trouble with sleeping (mean = 2.90 out of 4, standard deviation = .89). Many students also eat healthy food often, as the item had an average of 2.70 and SD of .86. The lowest of the healthier behavior averages were of eating breakfast, which had an average of 2.30 and SD of 1.11, and exercising, which had an average of 2.22 and SD of 1.02. The highest scoring negative health behavior was for alcohol consumption, which many students drink often as it had a mean of 2.94 and standard deviation of .79. Overall, the frequency of engaging in healthy behaviors had a composite mean equal to 2.61, and a composite standard deviation of .61.

The composite variable for the frequency of negative health symptoms experienced by the participants had a mean of 1.98 and a standard deviation of .61. This means that the sample experienced the symptoms on average “Less than 3 or 4 times per year”. Of the 50 participants, 8 people fell below the standard deviation meaning they almost never experienced the symptoms, while 9 fell above the standard deviation.

To determine the relationships between the three topics, correlations were found using the composite variables. When it comes to personality traits and their relationship with healthy behaviors, the most compelling results were found with emotional stability, conscientiousness and agreeableness. Emotional stability had a correlation of r = .44 with engagement in healthy behaviors, conscientiousness had a correlation of r = .37 and agreeableness had a correlation of r = .30. Extraversion and openness to experience had very small, positive relationships with engagement in healthy behaviors (r = .17 and r = .11). The frequency that a participant experienced physical health symptoms had the strongest relationship with openness to experience (r = .385). The relationship with emotional stability and health symptoms was r = -.22, and the relationship with extraversion and health symptoms was r = -.20. Conscientiousness and agreeableness both had low, negative correlations with health symptoms (r = -.11, and r = -.06).

In order to better understand the relationship between the variables, a few partial correlations were found. The correlation between conscientiousness and negative health symptoms, while controlling for healthy behaviors, dropped down to -.08. When doing the same for openness to experience, there was a correlation of .40 with health symptoms. While controlling for health related behaviors for emotional stability, there was a correlation with the frequency of experiencing health symptoms of r = -.19.

One surprising finding was the correlation between engagement in healthy behaviors and the frequency of experiencing physical symptoms was only r = -.11. I expected there to be a much stronger negative relationship between the two variables.

**Discussion**

The purpose of this study was to examine the relationship between personality characteristics, health behaviors and physical health symptoms. Conscientiousness has previously been linked to better health while aging and healthier behaviors throughout life. This study on 50 college-age men and women found similar results.

The most compelling findings from this study were on the relationship between personality and engagement healthy behaviors. This study demonstrated that people high in emotional stability and conscientiousness are more likely to engage in healthy behaviors. This makes sense, and resonates with previous studies’ findings on the topics. It was also interesting to learn that openness to experience had a strong, positive correlation with most frequently experiencing physical health symptoms. People who are open to new experiences are also more likely to engage in riskier behavior. I imagine it is that variable that explains the strong, positive relationship. In order to test this, I controlled for healthy behaviors and found the correlation between openness to experience and health symptoms. These variables now had an even stronger relationship of .401, which was unexpected. I was also surprised to learn that the relationship between frequently engaging in healthy behavior and frequently experiencing health symptoms was only -.11. I had expected this relationship to be much stronger in that if you live a healthy lifestyle, you will be a healthier person.

Conducting this study allowed for a deeper look into the variables of personality, healthy behaviors and health symptoms. While this is not a new topic to researchers, this particular study looked at a very unique demographic that is not often examined. Not only were the participants of this study college-age people, but also the vast majority (88%) were Asian.

These findings, while interesting, were limited by the lack of reliability in some of the composite variables used. Because of that, this study would need to be redone with higher reliability scores in order to offer credible results. Another issue with this study was the small sample size. If conducted again, a larger sample size will allow for more generalizable results without the issue of restriction of range.

In the future, it would be interesting to look further into the relationship between healthy behaviors and experiencing health symptoms. Personality is only one variable that can impact both, and it would be valuable to know how much engaging in healthy behaviors can actually do to maintain one’s health. If I were to conduct this specific experiment again, I would also have more items pertaining to Asian culture. With the demographic of this study being almost all Asian, that must have an impact on the different variables. Personality and health are two of the most important things in people’s lives and make them who they are. Psychology’s future efforts to study these topics can only benefit the lives of others.

References

Aldwin, C. M., Avron, I. S., Levenson, M. R., & Cupertino, A. P. (2001). Longitudinal findings from the normative aging study: III. Personality, individual health trajectories, and mortality. *Psychology and Aging,* *16*(3), 450-465. doi:10.1037//0882-7974.16.3.450

Hampson, S. E., Edmonds, G. W., Goldberg, L. R., Dubanoski, J. P., & Hillier, T. A. (2015). A life-span behavioral mechanism relating childhood conscientiousness to adult clinical health. *Health Psychology, 34*(9), 887-895. Retrieved from http://search.proquest.com.proxy2.library.illinois.edu/docview/1648591554?acco untid=14553