

**I N F O G R A P H I C S**

By Bella Chang

# Can certain personality traits predict long-term outcomes in depression?

## Defining Major Depressive Disorder

Depression is a mood disorder causing persistent sadness and loss of interest. It is considered a public health disease worldwide, particularly affecting young adults. Behavioral change is a key factor in preventing mental disorders and reducing the risk of depression (Edler et al., 2022). This suggests that analyzing the relationship between personality traits and depressive symptoms holds significant value for public health and should, therefore, be a priority.

Depressive symptoms can range from emotional to physical problems, which include: sadness or hopelessness, irritability, frustration, back pain or headaches, and loss of interest or pleasure in normal activities (Mayo Clinic, 2022).

## Connections to the Big 5 Personality Traits

The Big 5 Personality Trait model is a hierarchical model consisting of 5 higher-order dimensions which organize personality traits (Nouri et al., 2019). These personality characteristics are as follows:

**Openness: Curious vs. Traditional** The openness to experience, emphasizing imagination and insight. **Conscientiousness: Discipline vs. Carelessness** The motivation and persistence in achieving goals. **Extraversion: Energetic vs. Sober** The tendency to be sociable and active, with high amounts of emotional expressiveness. **Agreeableness: Trusting vs. Arrogant** The orientation one has toward others, emphasizing prosocial behaviours. **Neuroticism: Emotional distress vs. Emotional stability** The degree to which one experiences the world as psychologically distressing or threatening, with negative mood states.

## Personality traits and Depression

Within the general population, there has been evidence in the literature indicating that people with significant mental health problems are characterized by personality traits including high neuroticism and lower extraversion. A study by Nouri et al. (2019) shows the association between some personality traits and psychological problems. They used an updated Big 5 Personality test called the NEO-big five was used to measure participants' personality traits, and several questionnaires were used to measure psychological problems, revealing that participants with higher neuroticism scores had an increased risk of depression. Furthermore, higher scores of extraversion and conscientiousness were associated with 36% lower risk of psychological distress (Nouri et al., 2019). This can be explained as individuals with higher scores of neuroticism experience more intense negative emotions and emotional instability and tend to struggle to effectively cope with stressors. In contrast, those extraverted individuals will encounter stressful events as opportunities. This study allows us to observe how different personality traits show other coping methods and levels of vulnerability in experiencing stressful situations, thus affecting the likelihood of developing depressive symptoms overtime.

Furthermore, individuals with low conscientiousness and high agreeableness showed stronger positive associations between personal computer use and depressive symptoms, along with watching television and depressive symptoms. Research suggests that highly conscientious individuals with a more organized and disciplined personality are likely to be more motivated to meet health-related norms and recommendations. They may have a compensatory function for well-being by ensuring that everyday duties are met even after watching long hours of television.

Individuals with high agreeableness strongly need social interaction; therefore, television could be a placeholder for lack of interpersonal contact. Individuals with low levels of openness had a stronger positive association between computer use and depressive symptoms, and this may imply behaviours of social anxiety leading to social withdrawal, in turn representing a risk factor for depressive symptoms.

This study uses theory-based approaches to explain these results and increases validity through a comprehensive statistical approach. However, we must consider that the study lacks representativeness and generalizability, due to factors such as longitudinal dropouts and selection bias. There are further issues regarding self-report data, with no explanation of the motivation behind the media use, therefore results are strictly correlational.

## The roles of personality traits and perceived social support - between media use and depressive symptoms

To connect how personality traits determine depressive symptoms in domains of everyday activity, Edler et al. (2022) used self-reported data gathered through one-week accelerometer assessments to show how physically inactive individuals and extensive media users, which personality traits can predict, have a high risk for experiencing depressive symptoms. Surprisingly, individuals high in extraversion have a stronger association between media use and depressive symptoms, this is hypothesized to be a result of oversharing behaviour that enables harmful feedback and frequent social comparisons.

## *The effect of personality traits on morningness-eveningness and depressive symptoms*

Morningness-eveningness preference describes an individual's inclination to either wake up and go to bed early or follow a later daily schedule, reflecting an aspect of personal variations in circadian rhythms. It is associated with differences in sleep habits and psychological and behavioural characteristics, including alertness and cognitive effectiveness, emotional functioning, personality, or temperament (Gorgol et al., 2022).

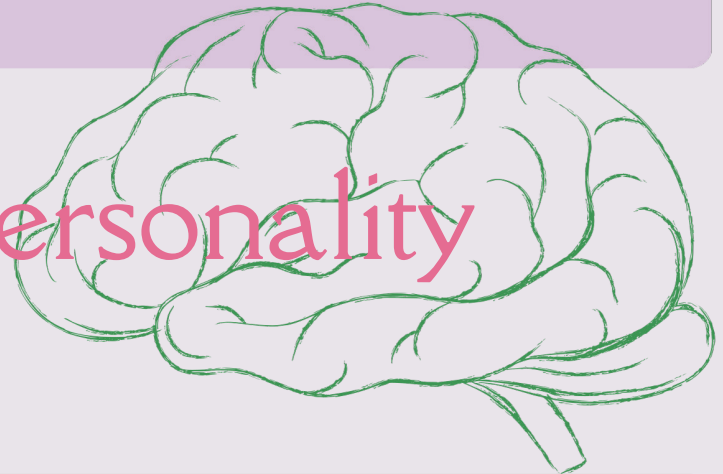


Gorgol et al. (2022) conducted research to show how conscientiousness and neuroticism moderate seasonal covariance between morningness-eveningness and depressive symptoms. Participants completed self-reported measures of preference, personality and symptoms twice in December and June. From winter to summer, there was a significant seasonal lowering in depressive symptoms and a shift towards morningness, which is a characteristic of being most active and alert during the morning. There was a more substantial decrease in depressive symptoms in those who experienced a more significant change towards morningness (Gorgol et al., 2022).

The study found that higher conscientiousness weakened the association between changes in eveningness and depressive symptoms, accounting for over 8% of the variance in symptom changes (Gorgol et al., 2022). This may be because individuals with greater self-discipline are better at maintaining consistent sleep schedules and avoiding sleep-disrupting behaviors, such as caffeine or alcohol consumption before bed, leading to improved sleep quality.

Lower neuroticism causes a weaker relationship between eveningness and depressive symptoms, accounting for 9% of variance in change in depressive symptoms as low neuroticism is linked with resilience to depression (Gorgol et al., 2022). Limitations include reliability of self-report data, and low generalizability due to the limited age range of participants. Nonetheless, the study provides valuable insight to showing how conscientiousness and emotional stability play a protective role against the maladaptive consequences of eveningness.

# The Big 5 Personality Traits



We are able to observe how the Big 5 Personality Traits predict long-term outcomes in depression through different responses to stressful situations (whether maladaptive or adaptive), which manifests into routine in everyday life. It is clear that various interventions can help individuals develop more positive personality traits (e.g., higher conscientiousness) by supporting behavioral changes until they become habitual, ultimately leading to trait-level personality changes that prevent the development of depressive symptomatology over time.

## References

- Edler, J.-S., Manz, K., Rojas-Perilla, N., Baumeister, H., & Cehres, C. (2022). The role of personality traits and social support in relations of health-related behaviours and depressive symptoms. *BMC Psychiatry*, 22(1), 1–15. ProQuest. <https://doi.org/10.1186/s12888-022-03693-w>
- Gorgol, J., Stolarski, M., & Jankowski, K. S. (2022). The moderating role of personality traits in the associations between seasonal fluctuations in chronotype and depressive symptoms. *Chronobiology International*, 39(8), 1078–1086. Taylor & Francis. <https://doi.org/https://doi.org/10.1080/07420528.2022.2067000>
- Mayo Clinic. (2022, October 14). *Depression (major depressive disorder)*. Mayo Clinic; Mayo Foundation for Medical Education and Research. <https://www.mayoclinic.org/diseases-conditions/depression/symptoms-causes/syc-20356007>
- Nouri, F., Feizi, A., Afshar, H., Keshteli, A. H., & Adibi, P. (2019). How five-factor personality traits affect psychological distress and depression? Results from a large population-based study. *Psychological Studies*, 64(1), 59–69. SpringerLink. <https://doi.org/doi.org/10.1007/s12646-018-0474-6>