Lowering Depression and Anxiety: A Quantitative Research on the Relationship of Six Common Habits on Human's Mental Health

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Objective

- Identifying the relationship between physical activity, eating disorder, smoking, drinking alcohol, social media, and education/technology and depression and anxiety to provide guidelines based on the factors in hope to reduce depression and anxiety.
- This research investigates more recent dominant habits. The outcome of the research provides guidance for the larger body of human society. The key to success of this research is the data and by using the data we hope to understand depression and anxiety and hopefully find ways to prevent it. The type of data we are using is BRFSS which will be analyzed and used in this research.

Introduction

Depression and anxiety are two widespread types of disorders that cause a tremendous consequence on human life. The World Health Organization (WHO) has ranked depression as the fourth leading cause of human disability. By 2020, it is expected to be the second leading cause [13]. Many researches touch the symptoms of anxiety and depression. As an example, depression causes health complications [26], cardiovascular diseases [8], in some cases increases the risk of cardiovascular diseases by 80% [19]. In case of anxiety, on average, up to 33.7% of the human populations experience it in their life time [6]. Anxiety not only affects the human body physically but also affects learning and reasoning capabilities [21][9]. Undeniably, these are two major risks for human life. This proposal analyzes data from the Behavioral Risk Factor Surveillance System (BRFSS)[2] for several years. It tries to find a relationship between six habit factors (physical activity, eating disorder, smoking, drinking alcohol, social media, and education/technology) and depression and anxiety. It proposes a solution that could lead to reduction of depression and anxiety in the society.

Methodlogy

At this point, We are planning to use python/pandas[4] to program, openRefine[3] to clean data, and D3[1] for visualization. This may change when the project evolves. Each member will extract data from topic assigned to them, clean it, and format it. From that point, we analyze the data, get conclusions, and produce the guidelines. Figure 1 shows the details on how various tasks are distributed among team members and how the timeline is formed to reach all the deadlines.