



# Diet Quality and Mental Health Symptom Severity

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## Introduction

- Depression, anxiety and stress are among the most prevalent mental health conditions affecting college students, contributing to academic impairment and reduced quality of life<sup>1</sup>
- Higher adherence to nutrient-dense dietary patterns, such as the Mediterranean diet, is associated with lower odds of developing depressive symptoms<sup>2</sup>
- Suboptimal diet quality has been consistently associated with increased risk of depression and anxiety<sup>3</sup>
- Nutrient deficiencies, including protein and folate, have been associated with increased risk of mental health symptoms<sup>4</sup>
- Protein intake and folate influences neurotransmitter synthesis, affecting mood and anxiety levels<sup>3</sup>
- College students often exhibit poor dietary habits that are high in processed foods, fat, and calories<sup>4</sup>
- Despite emerging evidence linking nutrition and mental health, few studies have examined the relationship between specific nutrients among college students.

## Objective

The aim of this study is to investigate dietary patterns and mental health status among young adults.

## Methods

- Online surveys were disseminated across campus
- The General Anxiety Disorder-7 (GAD-7) scale and the Depression, Anxiety, and Stress-21 items (DASS-21) were included in the survey
- Consumption of specific food groups was included and generated a diet-indexed score based on a 0-15 scale (MIND Diet scores) or 0-100 (HEI score); higher scores of this scale indicated a more nutrient-dense diet
- Dietary data was entered into the NDSR software and was analyzed using SPSS software

## Results

Table 1. Demographics

|                    | Survey (n=272) | Survey (n=111) | Survey (n=44) |
|--------------------|----------------|----------------|---------------|
| Sex (% Female)     | 208(76.5)      | 89(80.2)       | 37(84.1)      |
| Age ( $M \pm SD$ ) | 21.4( 3.1)     | 22.5(3.2)      | 21.6(3.3)     |
| Race (% Black)     | 111(40.8)      | 111(100)       | 44(100)       |
| Race (% Caucasian) | 84(30.9)       | N/A            | N/A           |
| Race (% Asian)     | 60(22.1)       | N/A            | N/A           |

Table 2. DASS-21 Symptoms

|                                  | Survey (n=272) | Survey (N=111) | Survey (N=44) |
|----------------------------------|----------------|----------------|---------------|
| GAD-7 ( $M \pm SD$ )             | 8.0(5.1)       | 8.3(5.5)       | 7.6(4.9)      |
| DASS-21 Depression( $M \pm SD$ ) | 10.1(9.8)      | 9.6(9.4)       | 9.0(9.1)      |
| DASS-21 Anxiety ( $M \pm SD$ )   | 8.3(0.9)       | 9.4(8.0)       | 8.6(7.5)      |
| DASS-21 Stress ( $M \pm SD$ )    | 14.0(8.7)      | 13.8(8.6)      | 13.8(8.7)     |

Table 3. Diet-related Results

|                                       | Survey (n=272) | Survey (N=111) | Survey (N=44) |
|---------------------------------------|----------------|----------------|---------------|
| MIND Diet Score (0-15) ( $M \pm SD$ ) | 7.6(2.1)       | 7.3(2.1)       | 7.3(2.0)      |
| HEI Mean Score (0-100) ( $M \pm SD$ ) | N/A            | N/A            | 47.4(10.0)    |

## Results

Figure 2. Natural Folate and Anxiety Status

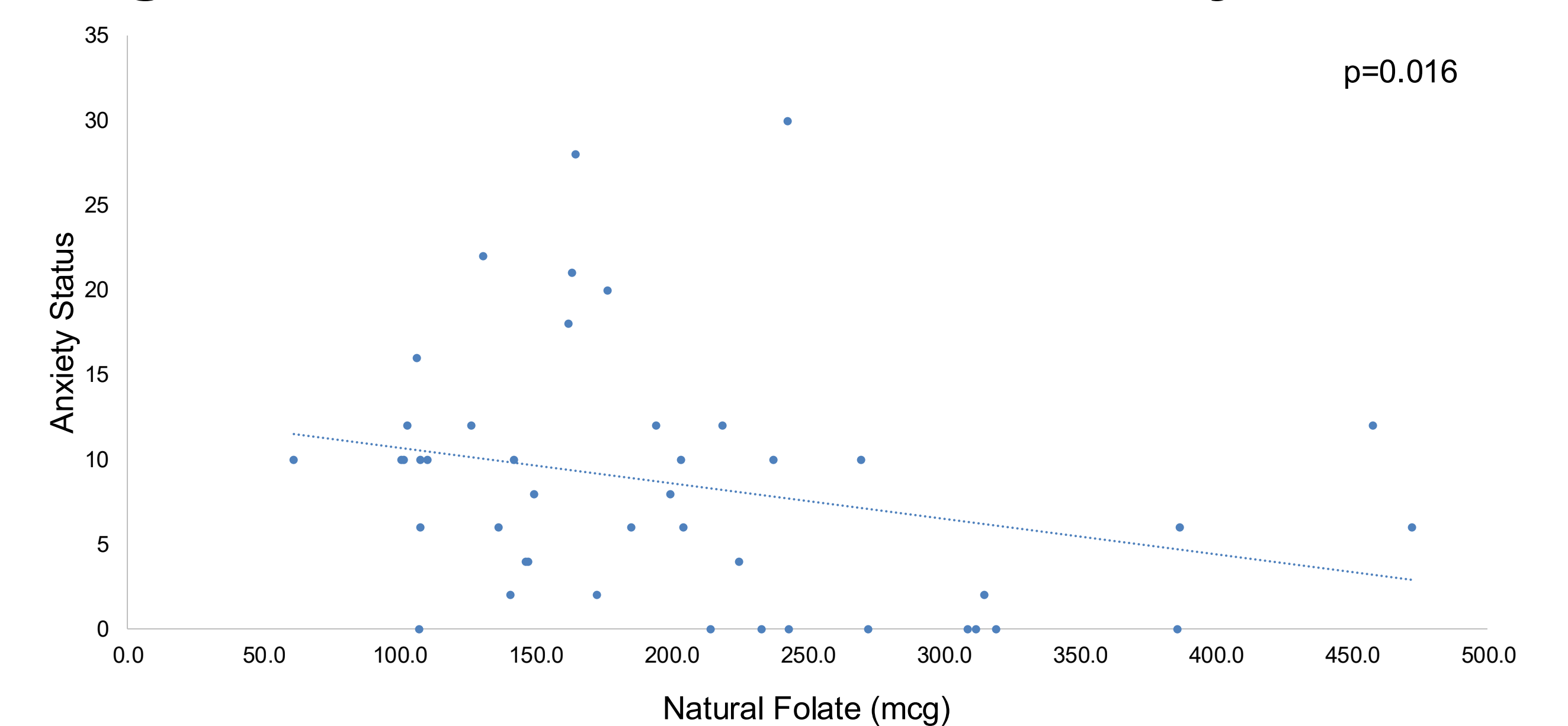
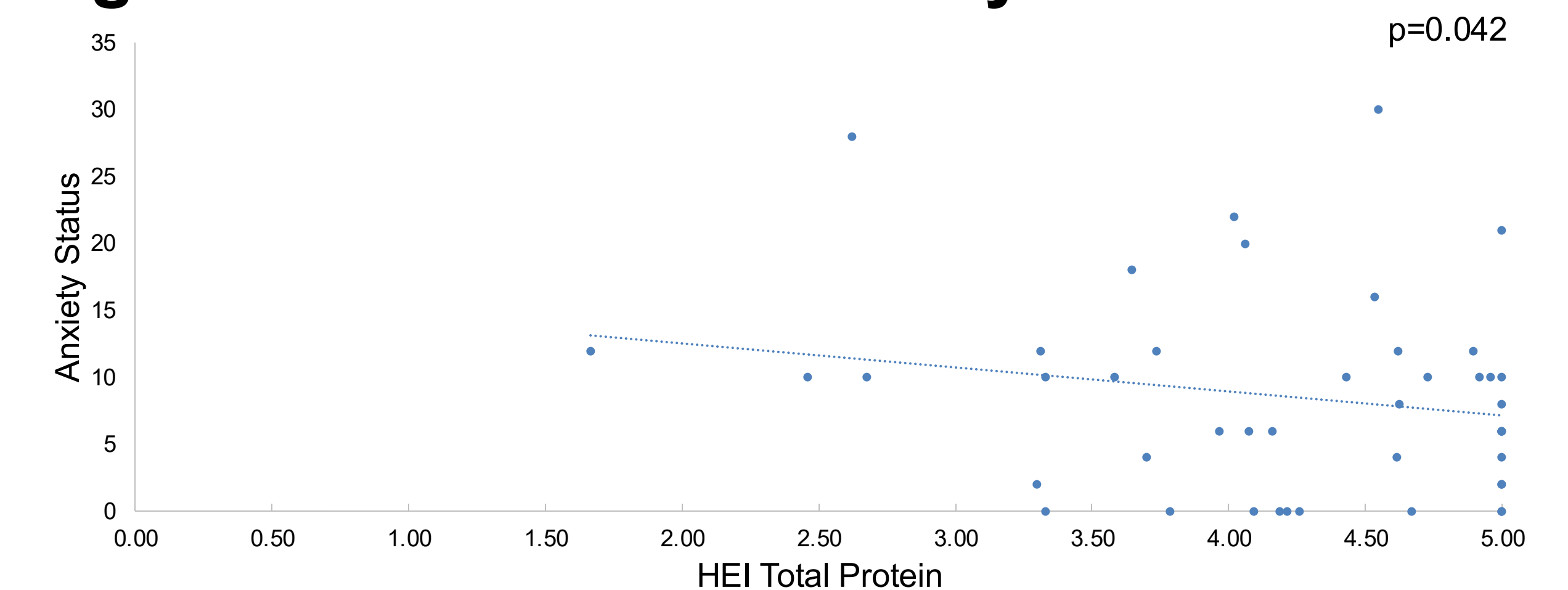


Figure 2. Protein and Anxiety Status



## Conclusion

Results indicate that participants reported higher levels of depression, anxiety, and stress while diet-indexed scores aligned with typical college students' diets that are often low in nutrient-dense foods. Data suggests that the lower the diet score and specific nutrients, the higher the anxiety symptom severity. Future studies should examine these relationships further.

## References

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