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Perceived Stress level, GI Symptoms, and Dietary Intake Among College Students During the COVID-19 Pandemic

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Background:

- The COVID-19 pandemic may have resulted in an increase in stress in college students for a variety of reasons.
- Stress can alter gut-brain interactions causing changes to GI function.

Objective:

- This study examined perceived stress, GI symptoms, and dietary intake among college students during the COVID-19 pandemic.

Methods:

- College students (n=459), aged 18-23, participated in this study.
- An online questionnaire was conducted in mid-April 2020, that included the
 - Perceived Stress Scale (PSS)
 - NCI Dietary Screener, and
 - An adapted version of the Gastrointestinal Symptoms Questionnaire.
- Separated the stress levels into low, medium, and high tertiles.
- ANOVA with Bonferroni correction was used to analyze the data.

Results:

- There was a significant difference in mean GI scores reported between those with low, medium, and high perceived stress.
- Mean fruit intake also differed among low and high perceived stress tertiles.



Perceived Stress Level, GI Symptoms, and Dietary Intake Among College Students During the COVID-19 Pandemic

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College students who were more stressed experienced more gastrointestinal symptoms.

Table 1. Differences in GI Symptoms and Dietary Intake between Perceived Stress Tertiles

MEASURE	LOW		MEDIUM		HIGH		F	η^2	p-value
	Mean	SD	Mean	SD	Mean	SD			
GI TOTAL	3.333	4.558	5.217	4.882	8.735	6.296	28.330	0.104	0.000^{abc}
WHOLE GRAIN	1.317	1.068	1.345	1.137	1.686	1.378	3.312	0.014	0.040^c
FRUITS	1.299	0.796	1.172	0.722	1.028	0.639	3.067	0.013	0.048^b

^a is significance between low and medium tertiles, ^b is significance between low and high tertiles, ^c is significance between medium and high tertiles

Conclusion:

- These results suggest that stress management should be prioritized to college students to possibly reduce the occurrence and severity of GI symptoms and improve the quality of the diet, especially in females.