



Perceived Stress Impact on Diet Quality in College Students Before and During COVID

Lillian Huynh, BS and Jesse Stable Morrell, PhD
Department of Agriculture, Nutrition, and Food Systems

Objective

To examine the relationship between perceived stress and dietary quality among college students before and during the pandemic.

Introduction

- University students are a vulnerable population
- The transitioning into adulthood is a critical time to foster positive behavior changes related to health
- Stress could also influence eating behaviors such as dietary intake
- COVID-19 lockdown caused unprecedented disruption to the daily lives of everyone furthering the burden on college students
- Students report lower mental health and lower diet quality during COVID-19¹
- Studies found had varying results and much of the literature did not address dietary quality²
- Additional layer of stress from the pandemic may also impact students' dietary choices
- It is important to understand how stress impacts diet quality for universities and colleges to be more prepared to support students' mental health and well-being

Key Findings

- Out of 100 points for DQ score, students mean score is 41 ± 11.9
- Only 3 students had a high DQ score of > 75 before the pandemic
- Students experiencing higher stress had lower DQ scores during the pandemic compared to before the pandemic

References

1. LaCaille LJ et al. *Ann Behav Med Publ Soc Behav Med.* 2021
 2. Hill D et al. *Health Psychology Review.* 2022
 3. Cohen S et al. *Journal of Health and Social Behavior.* 1983
 4. Kim S et al. *The Journal of Nutrition.* 2003
- Contact: Lillian.Huynh@unh.edu

Population Demographics & Characteristics

	Before Covid 2019-2020 Mean ± SD or % (n)	During Covid 2020-2021 Mean ± SD or % (n)	p-value
N	479	375	
Age	19.1 ± 1.3	19.1 ± 1.1	0.4
Gender			0.99
Male	40.1% (192)	40.3% (151)	
Female	59.9% (287)	59.7% (224)	
Smoking status [n (%)]	3.1% (14)	4.3% (16)	0.4
Alcohol use [n (%)]	73.5% (317)	72.5% (259)	0.8
Anxiety/depression medication [n (%)]	7.0% (32)	9.7% (34)	0.2
Pell grant received [n (%)]	23.6% (85)	26.6% (78)	0.4
Living quarter [n (%)]			.01*
With kitchen	32.0% (141)	39.8% (147)	
Without kitchen	68.0% (299)	60.2% (222)	
Perceived Stress Score	15.8 ± 6.6	16.9 ± 6.7	.04*
Diet Quality Score	42.5 ± 12.4	39.3 ± 10.9	<.001*

Methods

- Data were collected between 2019-21 at a northeastern, public university through the College Health and Nutrition Assessment Survey (IRB #5524)
- Stress was self-reported in an online questionnaire using a validated 10-item Perceived Stress Scale (PSS) using Cohen's Perceived Scale (0-40)³
- Diet quality (DQ) was scored using a modified Dietary Quality Index International (mDQI-I) from 0-100; scores were categorized as low (<56), moderate (56-75), and high DQ (>75)⁴
- Differences in DQ between PSS groups were evaluated using ANCOVA with gender, smoking, alcohol, anxiety and depression medication, Pell grant, and living quarter as covariates

Conclusion

More research is needed to assess whether additional stress has an impact on diet quality in college students.

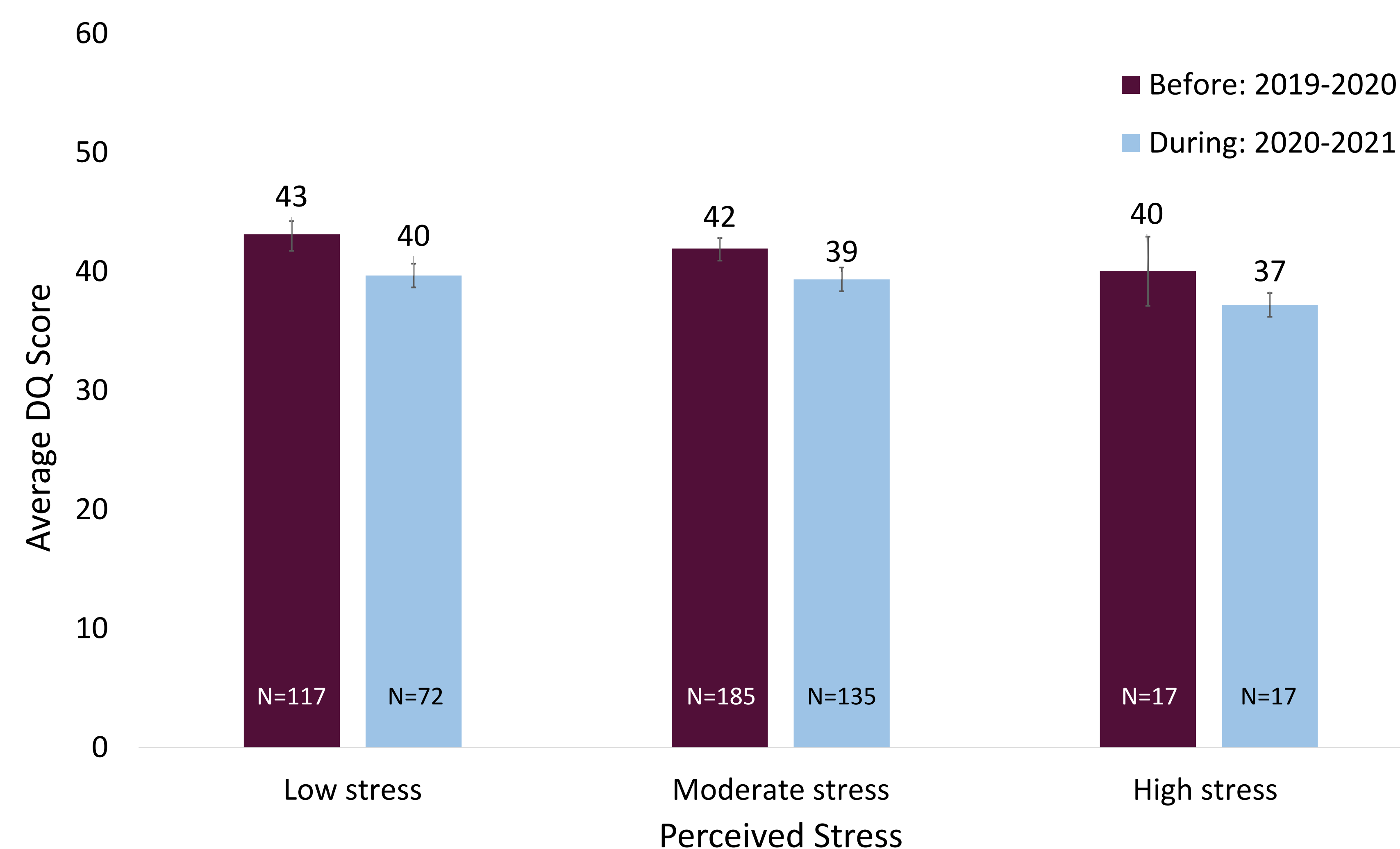
Takeaway

It is important for students to get support from college professionals and health educators on their mental health and well-being as dietary quality may be impacted by stress. College is an important period to initiate change to prevent diseases in the future.

Acknowledgements

Project funded by New Hampshire Agriculture Experiment Station and USDA National Institute of Food and Agriculture Hatch Project 1010738 and the Department of Agriculture, Nutrition, and Food Systems

Perceived Stress and Diet Quality



Result of ANCOVA on the association between perceived stress and dietary quality score controlling for gender, smoking status, alcohol consumption, anxiety/depression medication, Pell grant, and living quarter (p=0.9)