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# THE CORRELATION BETWEEN DIET, EXERCISE AND STRESS IN COLLEGE STUDENTS

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## ABSTRACT

The purpose of this study was to clarify whether or not there is a correlation between diet, exercise, stress and perceived personal health among college students. This study focuses on if age affects the amount of exercise and a person's diet considering their stress levels, and perception of health. Surveys were distributed and students (N=30) at Montana Tech/Highlands College in Butte, Montana were asked to complete them following approval from the University of Montana Institutional Review Board. The results of this study concluded that non-traditional age students seem to get more things accomplished, even though they reported higher levels of stress than traditional age students.

## BACKGROUND

Li and Lindsey (2013) conducted research to gain a better understanding of health promotion practices among college students and the relationship of stress and the practice of various health behaviors. They found a group of health-related behaviors and ways of thinking that may protect students from stress. Specifically, lower stressed students were more likely than higher stressed students to routinely practice 14 of 52 health-promoting behaviors or ways of thinking (Li & Lindsey, 2013). Pederson (2013) conducted a study about stress carry over in college students and their health outcomes. It appears that the carryover of stress operates both similarly and differently for college men and women, affecting at least one physical health outcome and perceived mental health (Pederson, 2013). Cain, Bardone-Cone, Abramson, Vohs, & Joiner (2010) conducted a study that investigated how the precursors of interpersonal self-efficacy and weight/shape self-efficacy would interact in the face of interpersonal stress to prospectively predict dietary restraint. Results consistent with prediction, low interpersonal self-efficacy and high weight/shape self-efficacy combined with high interpersonal stress (whether from same sex friendships, opposite sex friendships, or romantic relationships) to predict the highest levels of dietary restraint. (Cain, Bardone-Cone, Abramson, Vohs, & Joiner, 2010)

In a study conducted by Bland, Melton, Bigham, & Welle, (2015) the topic explored was the impact of physical activity and stress impact on college students. This study demonstrated the positive protective impact of physical activity behaviors and exercise on stress tolerance among college students.

## METHODS

This study used a quasi-experimental design. This study explored the entire sample with one index (dependent variable): A perceived stress scale consisting of fourteen Likert style questions asking about students' stress levels, and how they feel about the management of their stress. Independent variables included traditional and non-traditional age, gender, perceived personal health, and diets.

Participants in this study attend Montana Tech/Highlands College of the University of Montana in Butte, Montana, a town with a population of roughly 33,000-34,000 people. Out of the thirty-three students that were surveyed only thirty completed the survey to its entirety, leaving three surveys to be omitted because they were incomplete.

The sample included all students who filled out the entire survey (N=30). Students provided their consent to participate following Institutional Review Board guidelines through the University of Montana.

## RESULTS

Table 1  
Frequency Distribution of Independent Variables

Variable	Entire Sample (n=30)		Traditional Age (n=17)		Non-Traditional age (n=13)	
	(M)	(S)	(M)	(S)	(M)	(S)
<b>Independent Variables</b>						
Exercise						
Yes	(8)	27%				
No	(22)	73%				
Age						
18-24 (Trad)	(17)	57%				
25+ (Non-Trad)	(13)	43%				
Maintain Diet						
Yes	(11)	37%				
No	(19)	63%				
Consider Healthy						
Yes	(9)	30%				
No	(21)	70%				
Gender						
Male	(11)	37%				
Female	(19)	63%				

Frequency Distribution of Dependent Variables

Table 2

Variable	Entire Sample (n=30)		Traditional Age (n=17)		Non-Traditional Age (n=13)	
	(M)	(S)	(M)	(S)	(M)	(S)
<b>Dependent Variables</b>						
Upset about something unexpected	3.06	1.049	2.88	1.05	3.07	1.03
Unable to control important things	2.83	1.14	2.88	1.16	2.76	1.16
Felt Nervous or Stressed	3.73	.907	3.52	.799	4.0	1.0
Dealt with problems successfully	2.13	.681	2.11	.781	2.15	.554
Cope with important things	2.53	1.008	2.58	1.12	2.46	.877
Felt confident handling personal problems	2.10	.885	2.17	1.01	2.0	.707
Felt things going your way	2.57	1.07	2.76	1.14	2.3	.751
Felt you couldn't cope	3.20	1.063	3.23	1.09	3.1	1.06
Able to control irritations	2.60	.932	2.70	.849	2.4	1.05
Felt on top of things	2.53	.681	2.53	.799	2.54	.518
Angered because things outside your control	3.37	.999	3.17	1.10	3.16	.960
Thinking about things you have to accomplish	4.10	1.09	3.82	1.28	4.46	.662
Control the way you spend time	2.47	3.07	2.52	.943	2.38	1.12
Difficulties too high	3.07	1.17	3.00	1.32	3.15	.987

## Cronbach's Alpha Stress Scale Questions

Stress Scale = .779	Questions
	1) Upset about something happened unexpectedly 2) Unable to control important things in life 3) Felt nervous or stressed 4) Dealt with day to day problems successfully 5) Effectively cope with important things in life 6) Felt confident handling personal problems 7) Felt things going your way 8) Felt you could not cope with all to do 9) Able to control irritations 10) Felt on top of things 11) Angered because things are outside your control 12) Thinking about things you have to accomplish 13) Control the way you spend your time 14) Difficulties so high that you could not overcome

Descriptive data (Table 1) for dependent and independent variables included means and standard deviations. Dependent variables include questions from a stress scale that consists of fourteen questions asking about student stress levels, and how students feel they handle their stress. Independent variables include traditional and non-traditional age, gender, their perceived personal health, and their diets.

## CONCLUSION

This study focuses on if age affects the amount of exercise and a person's diet considering their stress levels, and perception of health. When assessing the descriptive data charts with dependent variables, out of the entire sample surveyed (N=30) there was significance when survey participants were asked whether or not they felt things were going their way. Non-traditional students (25+) stated that they very often felt things were going their way, rather than traditional students had a mean that was much less. Another significance was that non-traditional students were also more likely to feel stressed than traditional aged students. Non-traditional students have shown that although they are stressed out, they felt on top of things and they feel like things were most of the time going their way.

## FUTURE STUDIES

These findings had several implications to generate recommendations. First, adults are a diverse group, and specific factors of individuals' surroundings may have an unobservable effect which was not measured in the current study. A qualitative study is recommended to better understand student's perceived health, and its correlation to stress. This information could benefit the faculty, the students, and any member of a respective college. The results in this particular study show no real correlation between perceived health status and stress levels among college students. Taking into consideration that the sample size was extremely small, a larger sample could be beneficial for future research.

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