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## Peer Mentoring in College Freshmen: Effects on Physical and Mental Health

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## **Peer Mentoring in College Freshmen: Effects on Physical and Mental Health**

**Authors:** Wright JKS, Gill EM, Bingaman MG, Mansperger JA, Morgan AL, Ludy MJ

**Track:** Wellness and Public Health

**Learning Outcome (Upon completion, participant will be able to....):** Explain the effect of peer mentoring on preserving students' health behaviors.

**Learning Codes:** 6080 training, health coaching, and mentoring; 4090 Health behaviors: smoking cessation, stress management; 4040 disease prevention, health promotion

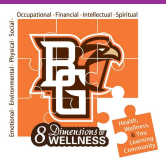
**Background:** College students often engage in unhealthy behaviors that have long-term health consequences. This study examines the effect of peer mentoring on physical and mental health markers during the first semester of college.

**Methods:** First-semester freshmen (n=30 females, ages 18-19) in a course-based learning community completed assessments of their physical and mental health at the beginning and end of the semester. These included body fat percentage (bioelectrical impedance analysis), cardiovascular (CV) fitness (recovery pulse following 3-minute step test; YMCA protocol), and stress (Inventory of College Student Recent Life Experiences; ICSRLE). Roughly half (n=14) received mentoring from high performing peers in health majors, while others (n=16) did not.

**Results:** Among students with mentoring, there were no significant changes in body fat percentage or CV fitness during the first semester of college. In contrast, percent fat ( $26.5 \pm 9.7$  to  $27.6 \pm 10.8\%$ ) and CV recovery pulse ( $107.9 \pm 24.7$  to  $123.6 \pm 26.0$  beats/minute) increased among students without mentoring ( $p < .05$  for both). Students who received mentoring experienced increases in stress related to disappointment by friends and important educational decisions ( $p < .05$  for both). Students without mentoring experienced increases in stress related to school dissatisfaction, intimate relationships, and demanding courses ( $p < .05$  for all).

**Conclusions:** Undesirable increases in fat percentage and decreases in CV fitness were noted in students who did not receive mentoring. Significant areas of stress, according to the ICSRLE questionnaire, are a good starting point for discussions during mentoring sessions. Results suggest that having the support of peers may be a promising way to preserve health markers in college.

**Funding Disclosure:** Ohio Department of Higher Education's Transforming Campus Climate Grant; Bowling Green State University Center for Undergraduate Research and Scholarship Grant



# Peer Mentoring in College Freshmen: Effects on Physical and Mental Health

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## ABSTRACT

**Background:** College students often engage in unhealthy behaviors that have long-term health consequences. This study examines the effect of peer mentoring on physical and mental health markers during the first semester of college.

**Methods:** First-semester freshmen (n=30 females, ages 18-19) in a course-based learning community completed assessments of their physical and mental health at the beginning and end of the semester. These included body fat percentage (bioelectrical impedance analysis), cardiovascular (CV) fitness (recovery pulse following 3-minute step test; YMCA protocol), and stress (Inventory of College Student Recent Life Experiences; ICSRLE). Roughly half (n=14) received mentoring from high performing peers in health majors, while others (n=16) did not.

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**Conclusions:** Undesirable increases in fat percentage and decreases in CV fitness were noted in students who did not receive mentoring. Significant areas of stress, according to the ICSRLE questionnaire, are a good starting point for discussions during mentoring sessions. Results suggest that having the support of peers may be a promising way to preserve health markers in college.

## OBJECTIVES

- Determine the effect of peer mentoring in a health and wellness learning community on students' health and health behaviors
- Evaluate if students who received peer mentoring would experience less weight gain throughout the semester than those without peer mentors
- Assess if students with peer mentors would see more improvements in cholesterol, blood pressure, and physical activity
- Determine if support of peers would decrease stress levels among the first-year college students

## INTRODUCTION

### Cardiovascular Disease (CVD)

- Leading cause of death in the U.S. since 1919 (1)
- 80% of CVD can be prevented through behavioral changes (1)
- Health and wellness education during year one of college has shown to have the most impact on students (2)
- Studies suggest that students may already have altered lipid values and high blood pressure (3)

### Health Behaviors

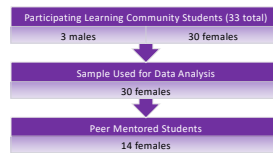
- Only about 44% of college students are meeting the recommendations for exercise (4)
- About 73% of college students only eat two or less servings of fruit and vegetables per day (4)
- 33% of students reported having five or more drinks in one sitting within the last two weeks (4)

## RESEARCH QUESTIONS

- Does peer mentoring improve students' mental health regarding perceived stress compared to the non-peer mentored group?
- Does peer mentoring improve students' physical health markers compared to the non-peer mentored group?

## METHODS

**Figure 1. Participant Population**



**Figure 2. Cardiovascular Fitness** was assessed using recovery pulse following 3-minute step test (5)

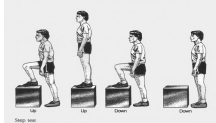


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**Figure 3. Academic Stress** using the Inventory of College Students' Recent Life Experiences (ICSRLE, 6).

Following is a list of experiences which many students have some time or other. Please indicate for each experience how much it has been a part of your life over the past month. Put a "1" in the space provided next to an experience if it was *not at all part of your life over the past month* (e.g., "trouble with mother in law = 1"); "2" for an experience which was *only slightly part of your life over that time*; "3" for an experience which was *distinctly part of your life*; and "4" for an experience which was *very much part of your life over the past month*.

### Intensity of Experience over Past Month

- 1 = not at all part of my life
- 2 = only slightly part of my life
- 3 = distinctly part of my life
- 4 = very much part of my life

1. Conflicts with boyfriend's/girlfriend's/spouse's family \_\_\_\_\_
2. Being let down or disappointed by friends \_\_\_\_\_
3. Conflict with professors \_\_\_\_\_
4. Social rejection \_\_\_\_\_
5. Too many things to do at once \_\_\_\_\_
6. Being taken for granted \_\_\_\_\_
7. Financial conflicts with family members \_\_\_\_\_
8. Having your trust betrayed by a friend \_\_\_\_\_

### The ICSRLE:

- Measures academic stress level using a series of 49 life-related events.
- Ranks the events on a scale of 1 (not at all part of my life) to 4 (very much part of my life)
- Ranges in score from 49 (least academic stress) to 196 (most academic stress)

## RESULTS AND DISCUSSION

**Table 1. ICSRLE Responses and Physical Health Markers in Students With Peer Mentoring**



Variable	Aug/Sept	Nov/Dec	Change	
	Mean/SD	Mean/SD	Mean/SD	p-value
Being let down or disappointed by friends	1.64±0.93	2.29±1.00	-0.64±0.93	0.022*
Important decisions about your education	2.00±1.04	2.57±0.94	-0.57±0.76	0.014*
Poor health of a friend	1.43±0.65	1.14±0.36	0.29±0.47	0.04*
ICSRLE-Total: 196=max, 49=min	82.29±21.98	38.5±18.30	-1.21±13.54	0.743
Fat	26.21±5.81	27.13±5.95	-0.92±1.92	0.096
Recovery Pulse (After Step Test)	97.71±24.53	100.21±28.07	-2.5±15.12	0.547

\*p<.05, \*\*p<.01

Individual questions: 4=very much, 3=distinctly, 2=only slightly, 1=not at all  
 Scale: 196=maximum stress, 49=minimum stress

Variable	Aug/Sept	Nov/Dec	Change	
	Mean/SD	Mean/SD	Mean/SD	p-value
Dissatisfaction with school	1.27±0.46	1.80±0.86	-0.53±0.74	0.015*
Decisions about intimate relationship(s)	2.00±1.07	2.60±1.06	-0.60±0.91	0.023*
Finding courses too demanding	1.20±0.41	1.67±0.72	-0.47±0.74	0.029*
Interruptions of your school work	1.93±0.70	1.33±0.49	0.60±0.83	0.014*
ICSRLE-Total: 196=max, 49=min	82.33±14.31	84.87±15.19	-2.53±16.89	0.571
Fat	26.49±9.69	27.64±10.78	-1.15±1.70	0.016*
Recovery Pulse (After Step Test)	107.88±24.75	123.63±26.02	-15.75±26.83	0.033*

\*p<.05, \*\*p<.01

Individual questions: 4=very much, 3=distinctly, 2=only slightly, 1=not at all  
 Scale: 196=maximum stress, 49=minimum stress

**Table 2. ICSRLE Responses and Physical Health Markers in Students Without Peer Mentoring**



## CONCLUSIONS

- Does peer mentoring improve students' mental health regarding perceived stress compared to the non-peer mentored group?
  - Peer mentored students did not experience an increase in perceived stress level compared to non-peer mentored students
- Does peer mentoring improve students' physical health markers compared to the non-peer mentored group?
  - Peer mentored students did not experience a decline in body composition or physical fitness compared to non-peer mentored students

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