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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

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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 unhealthful 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±9.7 to 27.6±10.8%) and CV recovery pulse (107.9±24.7 to 123.6±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.

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ABSTRACT

Background: College students often engage in unhealthful 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 the learning community, while the other half (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 (28.5±7.9 to 27.6±10.8%) and CV recovery pulse (107±24.7 to 123.6±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.

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 levels 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-mentored group?
- Does peer mentoring improve students’ physical health markers compared to the non-mentored group?

METHODS

Figure 1. Participant Population

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

RESULTS AND DISCUSSION

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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Avg/Sept</th>
<th>Nov/Dec</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICSRLE Total</td>
<td>196 (max), 49 (min)</td>
<td>32.14 (max), 0.94 (min)</td>
<td>0.09</td>
</tr>
<tr>
<td>Fat</td>
<td>22.1±5.81</td>
<td>27.3±5.95</td>
<td>-0.2±1.92</td>
</tr>
<tr>
<td>Recovery Pulse (After Step Test)</td>
<td>22.71±16.33</td>
<td>16.0±28.67</td>
<td>1.5±15.12</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Avg/Sept</th>
<th>Nov/Dec</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICSRLE Total</td>
<td>196 (max), 49 (min)</td>
<td>31.65 (max), 0.70 (min)</td>
<td>0.07</td>
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<tr>
<td>Fat</td>
<td>20.46±8.82</td>
<td>27.6±10.78</td>
<td>-0.5±17.06</td>
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<tr>
<td>Recovery Pulse (After Step Test)</td>
<td>23.48±14.71</td>
<td>15.3±24.69</td>
<td>-13.5±20.85</td>
</tr>
</tbody>
</table>

*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

CONCLUSIONS

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

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

REFERENCES

4. American College Health Association-National College Health Assessment II: Fall 2016