



Analysis of Health Promoting Lifestyle and Associated Factors Among Collegiate Aviation Pilots

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Abstract

Collegiate aviation pilot students face unique challenges in balancing a healthy lifestyle and academic demands. This ongoing study will assess the overall health promoting lifestyle and its associated factors among collegiate aviation pilots. A non-experimental survey methodology will be used to investigate Part 141 collegiate aviation students' health promoting lifestyle/behaviors across six areas: health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management. The research team has utilized the Health Promoting Lifestyle Profile II (HPLP II) to measure the participants' level of health promoting lifestyle. Information about participants' demographics and flight experience will also be collected as part of the survey. The results will be analyzed to determine relationships between the degree of healthy lifestyles of participants and the influential factors such as pilot experience and age. Findings will offer a better understanding regarding the connections and impact of the six domains of HPLP II on the lifestyles of collegiate aviation pilot students. Enhancing our comprehension of the lifestyles of these students can yield valuable insights into the challenges they encounter, and how institutions can enhance their support for them.

Introduction

Higher education students and professional pilots both face significant challenges in maintaining a health promoting lifestyle due to academic/professional demands. A research gap exists in analyzing the health-promoting lifestyle of collegiate aviation pilots.

- **Student Lifestyle Challenges:** Eighty-four percent of college students do not eat fruits and vegetables on a daily basis (Downes, 2015). A study by the American College Association (2022) found that the majority of college students do not meet the recommended physical activity guidelines of 30 minutes at least 5 days per week. Findings also suggested that seventy-seven percent of students experienced some kind of psychological distress, either moderate or severe. A finding of concern was that fifty-four percent experienced loneliness, and 30% had exhibited suicidal behavior.
- **Pilot Lifestyle Challenges:** Despite being scheduled for just 60% of the maximum legal duty and flight hours on average, three-quarters of pilots (76%) experienced severe or high levels of fatigue (Venus & Holtforth, 2022). One in four pilots (24%) reported significant sleep difficulties. Positive depression screening results were reported by 18.7% of pilots, while 8.5% had positive anxiety screenings. Additionally, 7.2% exhibited notable symptoms of depression and anxiety.

Methods

Participants and Measures

- This research project uses a non-experimental survey design to assess the health promoting lifestyle of collegiate aviation pilots. The sample population for this study are students actively enrolled in four-year Part 141 collegiate aviation flight programs in the U.S.
- The Health Promoting Lifestyle Profile II (HPLP II) (Walker et al., 1995) was used to measure participants' level of health promoting lifestyle. HPLP II measures the extent to which adults engage in a health promoting lifestyle through six domains: **health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management**. HPLP II consists of 52 questions about daily lifestyle choices and habits (Walker, 1995). Each question has four potential answers which are correlated with a 4-point scale: Never (N)=1, Sometimes (S)=2, Often (O)=3, Routinely (R)=4
- Information about participants' demographics and flight experience will be also collected as part of the survey questionnaire.

Procedures

- The research project is currently in the data collection process, with the survey distributed to multiple Part 141 flight programs across the US.
- Data collected using the HPLP II will be scored using the HPLP II survey grading criteria and compared to demographic/background information collected. The survey results will be analyzed to determine relationships between the degree of healthy lifestyles of participants and the influential factors such as pilot experience and or age.

Research Questions

- What is the overall health promoting lifestyle among Part 141 collegiate aviation pilots?
- What is the health-promoting behaviors in the areas of health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management of Part 141 collegiate aviation pilots
- Is there a difference in health promoting lifestyle among collegiate aviation pilots in different stages of training/experience levels?

Expected Findings

This study and associated data will provide insights on the following factors impacting collegiate aviation pilots:

- Overall students' health promoting lifestyle score/extent
- Relationships and effect of the six HPLP II domains on collegiate pilot lifestyles.
 - Health Responsibility
 - Physical Activity
 - Nutrition
 - Spiritual Growth
 - Interpersonal Relations
 - Stress Management
- Students' mental health and wellbeing
- Students' fatigue levels and associated challenges
- Relationship between academic/flight experience and health promoting lifestyle
- Relationship between student demographics and health promoting lifestyle

Significance

- **Practical:** The information obtained from this study may suggest ways to improve the flight training and education of collegiate aviation pilots in order to reduce the risks associated with fatigue and mental health during flight activities. A better understanding of lifestyle of collegiate aviation pilots can provide the scientific foundation for educational and institutional policies toward students' success.
- **Theoretical:** This research will aid in a greater understanding of lifestyle behavior and practices in a collegiate aviation environment. The effect of domains associated with a healthy lifestyle will help provide insight into the specific lifestyle choices made and challenges faced by collegiate aviation pilots.

References

- American College Health Association (2022). *National College Health Assessment III: Undergraduate Student Reference Group Executive Summary Spring 2022*. American College Health Association. https://www.acha.org/documents/ncha/NCHA-III_SPRING_2022_UNDERGRAD_REFERENCE_GROUP_EXECUTIVE_SUMMARY.pdf
- Downes, L. (2015). Physical activity and dietary habits of college students. *The Journal for Nurse Practitioners, 11*(2), 192-1198. <https://doi.org/10.1016/j.nurpra.2014.11.015>
- Venus, M., & Holtforth, M. G. (2022). Interactions of International Pilots' Stress, Fatigue, Symptoms of Depression, Anxiety, Common Mental Disorders and Wellbeing. *International Journal of Aviation, Aeronautics, and Aerospace, 9*(1), 1-26. <https://doi.org/10.15394/ijaaa.2022.1667>
- Walker, S. N., Sechrist, K. R., & Pender, N. J. (1995, January 1). *Health promotion model - instruments to measure health promoting lifestyle : Health-promoting lifestyle profile [HPLP II] (adult version)*. Deep Blue Repositories. <https://deepblue.lib.umich.edu/handle/2027.42/85349>