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Assessment of Mental Health and Help-Seeking Barriers Among Collegiate Aviation Students

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Mental health concerns among collegiate aviation students have become increasingly significant as the demands of flight training and academic performance intersect with regulatory pressures unique to the aviation industry. This study examined levels of anxiety, depression, and self-stigma related to help-seeking among students enrolled in aviation-related programs across five U.S. institutions. Using a non-experimental, quantitative survey design, data were collected from 231 participants using the Generalized Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-9 (PHQ-9), and custom items assessing stigma and attitudes toward seeking mental health support. Results revealed that 43.7% of respondents met criteria for at least mild anxiety and 39.8% for at least mild depressive symptoms. Notably, over half of the respondents expressed reluctance to seek counseling due to concerns about Federal Aviation Administration (FAA) medical certification implications. Findings highlight the prevalence of mental health challenges among aviation students and underscore the need for institutional interventions to reduce stigma and align support services with aviation-specific career considerations.

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Introduction

Collegiate aviation students, including those pursuing programs in flight training, air traffic control management (ATC), and aircraft maintenance (A&P), face unique high psychological and academic demands. Managing academic coursework, practical coursework, and Federal Aviation Administration (FAA) certification requirements often contributes to elevated levels of stress, anxiety, and reduced well-being among these students (Mendonca et al., 2023; Pitts & Faulconer, 2023). Broader research indicates that nearly one in three young adults experience depression or anxiety, with 30.6% of those aged 18–25 reporting depressive symptoms in 2020 (Goodwin et al., 2022). Aviation-specific stressors, however, extend beyond academics. The FAA medical certification process introduces an additional psychological burden. More than half of collegiate aviation students perceive FAA mental health regulations as overly restrictive, and nearly half report reduced willingness to seek professional help as a result (Stein, 2023). Such perceptions mirror trends among professional aviators, where disclosure fears often deter care-seeking (Cross et al., 2024). Research on professional pilots and air traffic controllers indicates elevated rates of anxiety, depression, and fatigue linked to high workload, performance evaluation, and regulatory scrutiny (Wu et al., 2016; Rutledge et al., 2024). However, limited studies have explored these issues among collegiate aviation students, a critical population preparing to enter the industry. To address this research gap, this study aimed to evaluate collegiate aviation students' mental health, perceptions surrounding help-seeking behavior, and FAA medical disclosure.

Methodology

Research Design and Participants

A non-experimental, quantitative survey design was utilized to measure mental health indicators and attitudes among collegiate aviation students. Participants were recruited from five U.S. institutions offering aviation training programs. Eligible participants were 18 years or older and actively enrolled in an aviation-related major, including flight, air traffic control management (ATC), aviation maintenance (A&P), or unmanned aircraft systems (UAS).

Data Collection and Analysis Procedures

A 35-question online survey was distributed via Google Forms and consisted of three components: (1) demographic and academic background; (2) standardized mental health instruments; and (3) custom items addressing self-stigma and regulatory attitudes. The Generalized Anxiety Disorder-7 (GAD-7) and Patient Health Questionnaire-9 (PHQ-9) provided quantitative assessments of anxiety and depression severity, respectively. Both instruments are validated for screening in non-clinical populations and use cutoff thresholds to categorize symptom levels as minimal, mild, moderate, or severe. The final section comprised ten custom statements rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), assessing stigma, willingness to seek counseling, and perceived FAA medical certification repercussions. These items were developed based on existing literature in aviation psychology and pilot stigma research. Data were analyzed using IBM SPSS to calculate descriptive statistics,

correlations between variables, and non-parametric Kruskal-Wallis H-tests to explore group differences by program type and gender.

Results

A total of 231 valid responses were included in the analysis. The majority of participants were male (71%), aged 18–24 (84%), and pursuing flight training or air traffic management programs (68%). Figure 1 illustrates the distribution of GAD-7 anxiety levels, while Figure 2 displays PHQ-9 depression scores across participants.

Figure 1
GAD-7 Anxiety Score Distribution

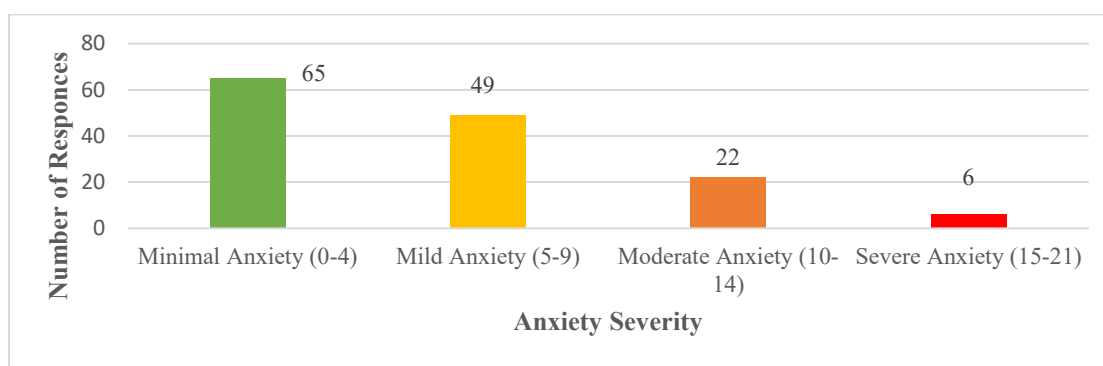
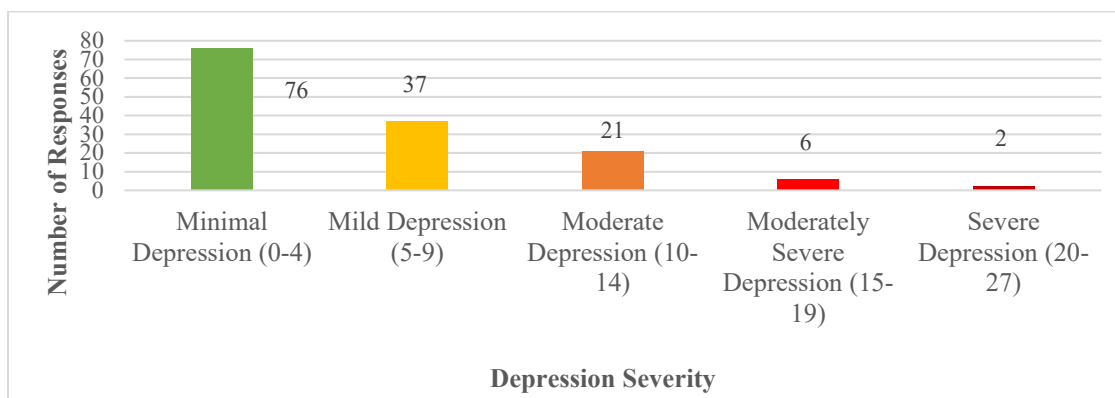


Figure 2
PHQ-9 Depression Score Distribution



Analysis revealed that 43.7% of participants met criteria for at least mild anxiety (GAD-7 ≥ 5), with 18.1% reporting moderate to severe symptoms (GAD-7 ≥ 10). Similarly, 39.8% exhibited at least mild depressive symptoms (PHQ-9 ≥ 5), and 15.3% fell within the moderate to severe range (PHQ-9 ≥ 10).

A significant proportion of respondents (56%) agreed or strongly agreed that they would hesitate to seek counseling due to FAA medical certification concerns. Approximately 48% agreed that pilots who disclose mental health issues are perceived as less competent, reflecting

internalized stigma within the aviation community. Gender-based comparisons using Kruskal–Wallis tests indicated no significant differences in anxiety ($p = .432$) or depression scores ($p = .379$). However, female participants reported slightly higher perceived stigma levels and greater concern about regulatory repercussions.

Discussion

The results highlight a substantial prevalence of anxiety and depression symptoms among collegiate aviation students, consistent with broader trends in university populations but complicated by aviation-specific stressors (Abrams, 2022; Goodwin et al., 2022; Mendonca et al., 2023). Prior research has shown that collegiate aviators experience higher levels of psychological distress due to the combined demands of academic performance, financial pressure, and the technical rigor of flight training (Clarke et al., 2024; Pitts & Faulconer, 2023). The intersection of mental health and aviation regulation introduces unique barriers, as fear of FAA medical review may deter individuals from seeking timely support (Stein, 2023; FAA, 2024). This finding underscores the systemic nature of stigma in aviation, where mental health is often equated with diminished performance or safety risk (Cross et al., 2024; Corrigan & Rao, 2012).

The high percentage of students reluctant to seek counseling potentially reflects perceived incompatibility between self-care and aviation professionalism. Many participants viewed mental health disclosure as a potential career threat, mirroring concerns observed in professional pilot populations (Wu et al., 2016; Minoretti et al., 2023; Rutledge et al., 2024). Similar trends have been documented among airline pilots and air traffic controllers, where fear of certificate suspension or career disruption discourages open discussion of psychological concerns (DeHoff & Cusick, 2018; Cross et al., 2024). These findings suggest that education surrounding FAA medical policies is insufficient and that misconceptions about disqualification remain widespread (FAA, 2024).

From an institutional perspective, aviation programs should consider integrating proactive wellness initiatives, including confidential counseling access, peer mentorship, and faculty training to identify at-risk students. Such approaches align with prior research emphasizing the role of early intervention and resilience training in collegiate pilot programs (Mendonca et al., 2024; Key et al., 2023). Embedding mental health resources into existing Safety Management System (SMS) frameworks may also normalize psychological well-being as a component of aviation safety culture. Rather than focusing solely on compliance, SMS implementation could incorporate mental health indicators into hazard identification and risk assessment processes (Ahad et al., 2023; Ahmed et al., 2021; Flight Safety Foundation, 2024).

Additionally, outreach from the FAA to clarify mental health reporting procedures could alleviate unnecessary fears among student pilots. Improved communication and transparency regarding the medical review process have been recommended by both academic researchers and aviation safety organizations (Shepardson, 2023; FAA, 2024). Collaborations between regulators, universities, and flight departments are needed to modernize the perception of mental fitness, ensuring that students can seek help without jeopardizing aviation career aspirations (Boyd & Bliss, 2024; Minoretti, 2025).

Conclusion and Future Work

This study highlights that mental health challenges, particularly anxiety, depression, and stigma, are prevalent among collegiate aviation students. The results indicate that regulatory perceptions significantly influence help-seeking behavior, with more than half of participants citing FAA medical concerns as a deterrent to accessing support. Institutions should prioritize targeted mental health education and integrate well-being strategies within training curricula to promote a sustainable, safety-oriented aviation workforce. Future research should explore trends or changes in student mental health as they progress through training, examine intervention effectiveness, and compare aviation-specific populations with general university cohorts.

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