

# A Survey of Collegiate Pilots' Mental Health to Identify Aeromedical Nondisclosure and Healthcare-Seeking Behaviors

Lauren E. Pitts, Embry-Riddle Aeronautical University Worldwide

## Abstract

Medical certification systems rely on pilots to be honest in disclosing medical conditions, yet:

- In a survey<sup>1</sup> of 3,756 pilots of various experience levels, nearly 56% reported at least one healthcare avoidance behavior and nearly 27% admitted to withholding information from their healthcare providers.
- A 2016 study<sup>2</sup> found that 233 (16%) of 1,848 surveyed airline pilots met the threshold for a clinical depression diagnosis, while 75 pilots (4%) reported suicidal thoughts within the last two weeks.

Motivations for these behaviors are linked to the fear of losing medical certification and losing active flying status<sup>1</sup>.

Presently, the aeromedical nondisclosure and healthcare-seeking behaviors of the collegiate pilot population have not been quantified in scientific literature.

### Hypothesis:

- We hypothesize that collegiate pilots will demonstrate aeromedical nondisclosure behaviors as well as an aversion to seeking healthcare for mental health.

### Research Questions:

- What is the current likelihood that collegiate pilots will seek care for mental health issues?
- What is the role that fear of loss of medical certification plays in a collegiate pilot's decision to seek care?

## Methods

### Research Site & Participants:

- U.S.-based, large-sized, accredited, private university
- Total population of students enrolled in flight training programs, N = 2,452

### Instrumentation:

- Anonymous, online Qualtrics survey with 19 closed-ended, multiple choice and Likert scale questions adapted from Hoffman<sup>1</sup> and the Patient-Health Questionnaire Depression Module (PHQ-9)

### Data Analysis:

- Spearman's rank-order correlation was used to determine the relationship between the severity of mental health symptoms (PHQ-9 score) and healthcare-seeking and nondisclosure behaviors

## Results

### Surveys were pooled into two samples for analysis:

- Respondents that answered all four primary survey questions but did not answer all PHQ-9 questions (total valid sample, N = 256)
- Respondents that answered all four primary survey questions and all PHQ-9 questions (sub-sample, n = 232)

Figure 1: Depression Severity (according to PHQ-9 score)

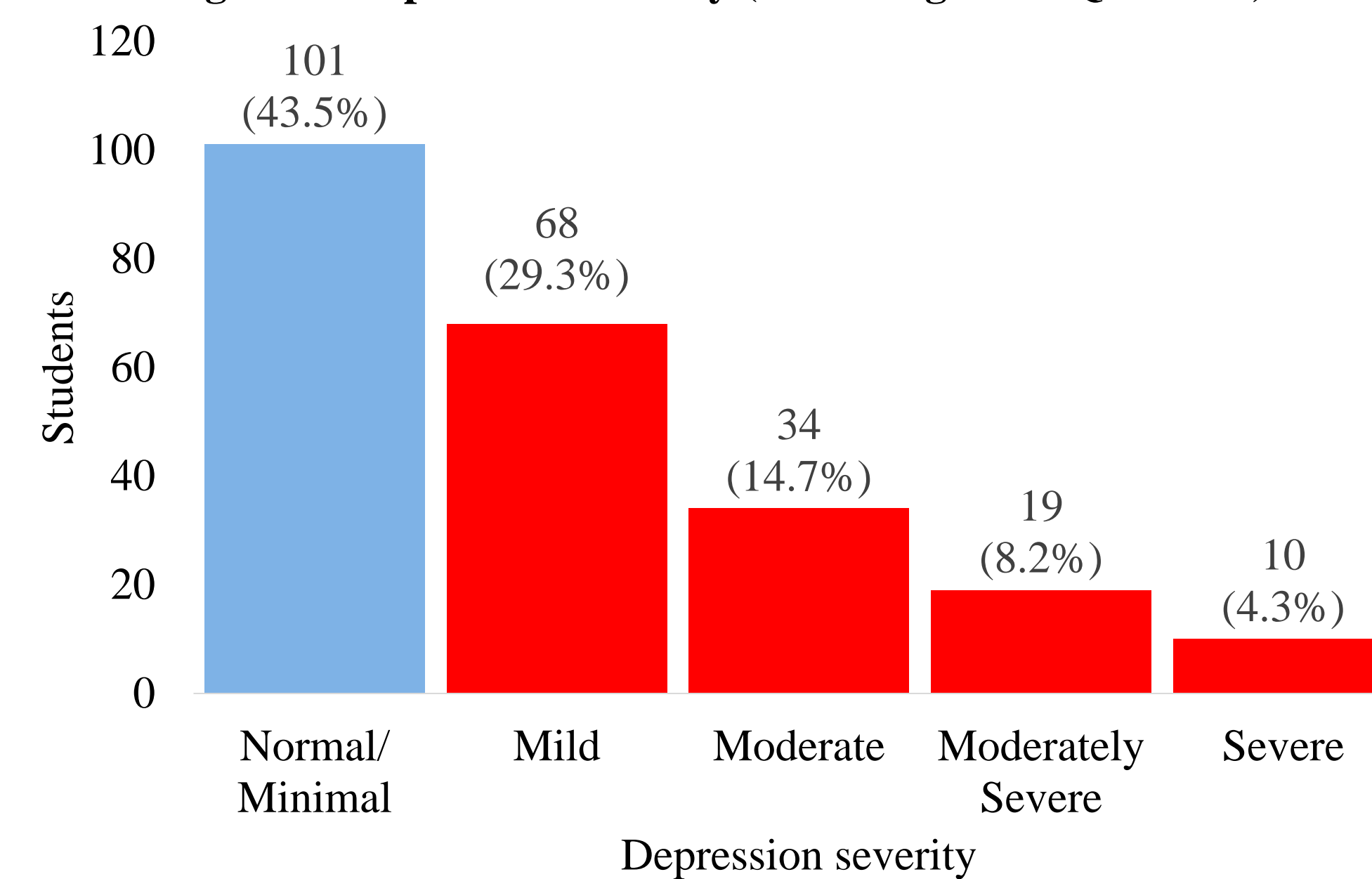


Figure 2: Presence of Self-Injurious or Suicidal Thoughts

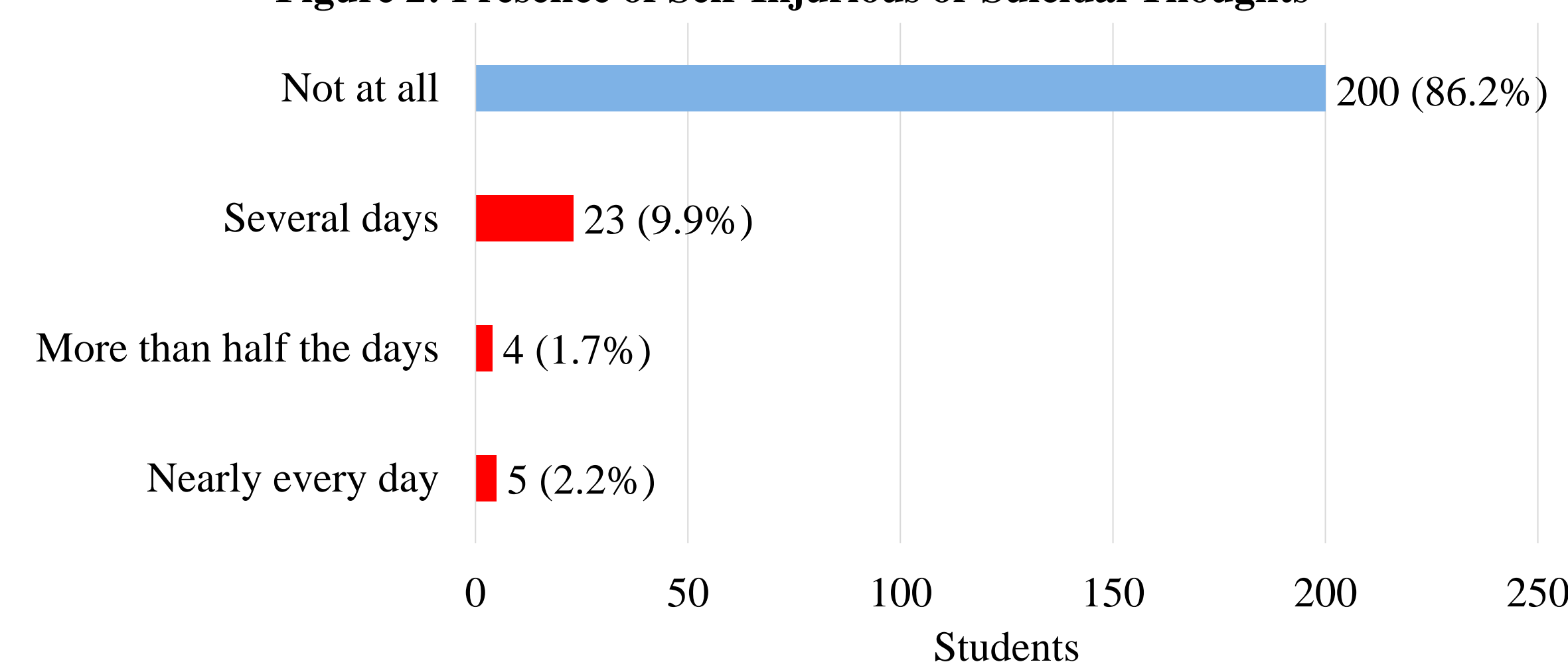
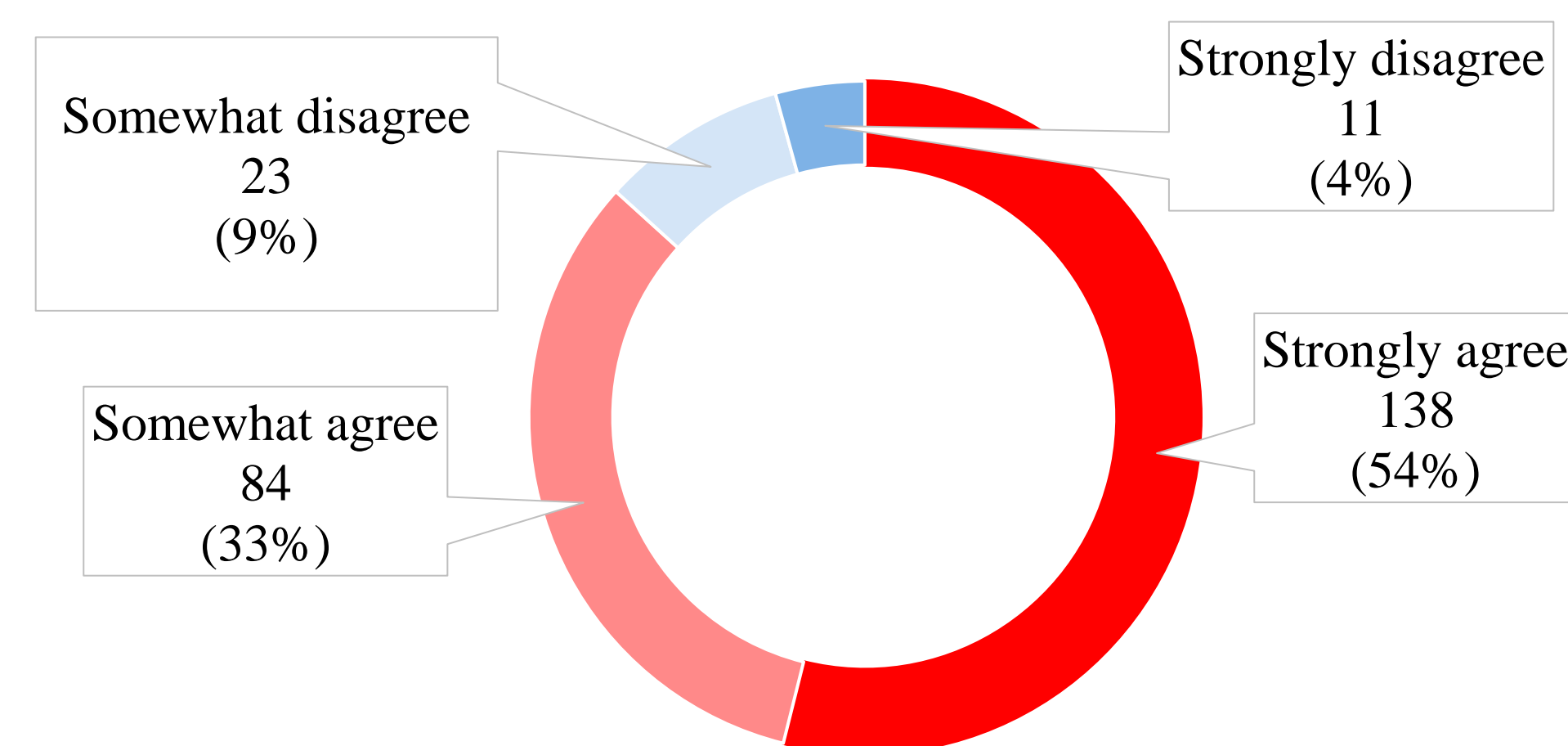


Figure 3: Likert responses to the following phrase, "...If my medical certificate might be threatened by my decision to seek care, I do not seek care."



### Prevalence of Depression in Collegiate Pilots (n = 232)

- 132 (56.6%) respondents met the PHQ-9 threshold for some degree of depression within the past two weeks (Figure 1)
- Of the 132 respondents that met the threshold for depression, 23 (17.4%) expressed intent to seek, or have already sought treatment for mental health symptoms.
- 32 (13.8%) respondents reported some degree of self-injurious or suicidal ideation within the past two weeks (Figure 2)
- Of the 32 respondents that reported self-injurious or suicidal ideation, 8 (25%) expressed intent to seek, or have already sought treatment for mental health symptoms.

### Mental Healthcare-Seeking Behaviors of Collegiate Pilots (N = 256)

- 16 (6.3%) respondents reported a prior depression diagnosis
- 173 (67.7%) respondents reported that they worry about seeking care for mental health because of potential effects on their medical certification
- 75 (29.3%) respondents reported withholding information about mental health from aeromedical examiners and screenings out of concern for their medical certification
- 222 (86.7%) respondents agreed to some degree that they would choose not to seek medical treatment if their decision to do so might threaten their medical certification (Figure 3)

### Spearman Rank Correlations

- Weak linear correlation between depression severity (PHQ-9 score) and intensity of worry surrounding healthcare-seeking decisions,  $r(227) = 0.38$ ,  $p = 0.000$
- Weak linear correlation between depression severity (PHQ-9 score) and nondisclosure behaviors,  $r(206) = 0.45$ ,  $p = 0.000$
- The model did not yield any other statistically significant values in the remaining correlations

## Discussion

- The prevalence of depressive symptoms among collegiate pilots is consistent with national data, but higher than students in other high-stress college programs like medicine.
- The prevalence of self-injurious or suicidal thoughts among collegiate pilots is consistent with national data and rates among medical students, but higher than the rates among airline pilots.

	Collegiate Pilots	Airline Pilots	Medical Students	National Data
Depression symptoms	56.6%	N/A	30.3% <sup>3</sup>	52.3% (for ages 18-24) <sup>4</sup>
Self-injurious/suicidal thoughts	13.8%	4.1% <sup>2</sup>	11.1% <sup>5</sup>	11.3% (for ages 18-25) <sup>6</sup>



Figure 47: Collegiate pilots are affected by healthcare avoidance and nondisclosure issues.

## Conclusion

- Healthcare avoidance and nondisclosure issues previously established in scientific literature are not limited to airline pilots and are indeed present in the collegiate pilot population as well.**
- The results support our hypothesis that collegiate pilots demonstrate aeromedical nondisclosure behaviors as well as an aversion to seeking healthcare for mental health.
- 87% of collegiate pilots agreed that fear of loss of medical certification plays a role in their decision to seek healthcare.
- For collegiate pilots experiencing symptoms of depression, 17% were likely to seek treatment.
- For collegiate pilots experiencing self-injurious or suicidal thoughts, 25% were likely to seek treatment.

## References

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